

EXHIBIT 7

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF WISCONSIN

SCOTT WEAVER, individually and
on behalf of all others similarly
situated,

Plaintiff,
v.

CHAMPION PETFOODS USA, INC.
and CHAMPION PETFOODS LP,

Defendants.

Case No. 2:18-cv-1996-JPS

Rebuttal Expert Report of Dominique M. Hanssens

September 12, 2019

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I. Qualifications

1. I am a Distinguished Research Professor of Marketing at the UCLA Anderson School of Management in Los Angeles, California, where I have served on the faculty since 1977. I received my Licentiate from the University of Antwerp in Applied Economics and received my M.S. and Ph.D. degrees in Management from Purdue University. At UCLA I have taught a variety of marketing courses including Elements of Marketing, Marketing Strategy & Planning, and Customer Information Strategy. I have received awards for distinguished teaching in the MBA and Executive MBA programs, including the UCLA Anderson School's Neidorf "Decade" teaching award.
2. My research focuses on strategic marketing problems, to which I apply expertise in data-analytic methods, such as surveys, econometrics, and time-series analysis. My research includes analysis of how consumers respond to alternative information disclosures. I am the co-author of *Market Response Models: Econometric and Time Series Analysis* and various book chapters. I have served as an area editor for *Marketing Science* and an associate editor for *Management Science* and the *Journal of Marketing Research*. My papers have appeared in the leading academic and professional journals in marketing, economics, and statistics. Five of these articles have won Best Paper awards, in *Marketing Science* (1995, 2001, 2002), *Journal of Marketing Research* (1999, 2007), and *Journal of Marketing* (2010), and ten were award finalists.
3. From 2005 to 2007, I served as the Executive Director of the Marketing Science Institute in Cambridge, Massachusetts. The American Marketing Association awarded me the Churchill Award (2007) and the Mahajan Award (2013) for Career Contributions to Marketing Research and Marketing Strategy, respectively. The INFORMS Society for Marketing Science elected me as a Fellow (2010) and awarded me the Buck Weaver Award (2015) for lifetime contributions to the theory and practice of marketing.
4. I have frequently consulted on marketing issues for companies in a variety of industries such as automobile, consumer products, technology, information services, and retail. These consulting assignments include the design and supervision of dozens of consumer surveys in a variety of sectors. I am also a founding partner of MarketShare, a global marketing analytics firm headquartered in Los Angeles. A copy of my curriculum vitae, setting forth my professional experience and qualifications is attached as Appendix A.
5. I have served as an expert witness or offered consulting services in matters relating to factors impacting consumer behavior in a variety of product categories. Many of these

matters involved allegations of false advertising and product misrepresentation by the manufacturer of the product at issue in consumer class actions. I have also provided expert testimony and consulted on a variety of issues relating to brands and branding, and general marketing strategy. Much of my consulting and expert witness work involved analysis of consumers' preferences for product attributes where I analyzed and measured how consumers react under different information conditions (such as the presence or absence of product or service-specific disclosures). As part of my expert witness work, I also conducted consumer surveys in multiple matters. A list of my testimony in the past four years is attached as Appendix B.

II. Summary of Allegations and Case Background

6. Champion Petfoods USA Inc. and Champion Petfoods LP (collectively, "Champion") produce and sell a variety of dry foods, freeze-dried foods, and treats for dogs and cats under two brand names: ACANA and ORIJEN.¹

7. Of specific interest in this matter are several marketing claims on the packaging of the ACANA and ORIJEN branded dry and freeze-dried dog food products ("Products At Issue" or "At-Issue Products") that Plaintiff Mr. Scott Weaver ("Plaintiff" or "Mr. Weaver") alleges are false or misleading.² Specifically, the Plaintiff alleges that Champion's marketing of the At-Issue Products as "'Biologically Appropriate' foods that use 'Fresh Regional Ingredients' consisting only of meat, poultry, fish, and vegetables"³ is misleading due to "the presence and/or risk of inclusion in their pet food of heavy metals, pentobarbital, toxins, Bisphenol A ("BPA"), non-regional and non-fresh ingredients, and/or unnatural or other ingredients that do not conform to [Champion's] labels, packaging, advertising, and statements" and the undisclosed risk of dogs developing Dilated Cardiomyopathy ("DCM").^{4, 5} According to the

¹ "Our Foods," *Champion Petfoods*, <https://www.championpetfoods.com/our-foods/>.

² Third Amended Class Action Complaint, *Scott Weaver v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 2:18-cv-01996-JPS, July 22, 2019 ("Third Amended Complaint"), ¶¶ 2–17.

³ Third Amended Complaint, ¶ 71.

⁴ Third Amended Complaint, ¶¶ 1, 10. At-Issue Products include 22 specific Champion products, sold under the ACANA and ORIJEN brand names. See Third Amended Complaint, ¶ 26.

⁵ Specific marketing claims highlighted by the Plaintiff as inconsistent with presence of heavy metals and toxins include: "Virtually All Of The Nutrients In Acana Are Natural And Not Synthetic;" "Deemed fit for human consumption;" "Never Outsourced;" "Biologically Appropriate;" "Fresh Regional Ingredients;" "Delivered Daily;" "Trusted Regional Ingredients;" "Trusted by Pet Lovers Everywhere;" "Ingredients We Love;" "People We Trust;" "Nourish as Nature Intended;" "Delivering Nutrients Naturally;" "Made with Fresh and Natural Ingredients;" "Orijen pet foods 'feature[] unmatched and unique inclusions of meat, naturally providing everything your dog or cat needs to thrive;" and "Orijen and Acana foods are 'guaranteed' to 'keep your dog

Plaintiff, the “[n]on-disclosure and/or concealment of the risk and/or actual inclusion of heavy metals, pentobarbital, ingredients cross-contaminated with horse meat, toxins, BPA, non-regional and non-fresh ingredients, and/or unnatural or other ingredients that do not conform to the labels, packaging, advertising, and statements in the Contaminated Dog Foods coupled with the misrepresentations that the food is healthy, nutritious, superior quality, natural, and/or unadulterated, and made with fresh and regional ingredients that were never outsourced is intended to and does, in fact, cause consumers to purchase a product Plaintiff and members of the Class would not have bought if the true quality and ingredients were disclosed.”⁶

8. Plaintiff seeks certification of a putative class of “[a]ll persons residing in the State of Wisconsin who purchased Dog Food between July 1, 2014 and the present (the “Class Period”),” except “persons or entities who purchased the Dog Food for business use or resale; governmental entities; Defendants and its affiliates, subsidiaries, employees, current and former officers, director, agents, and representatives; and members of this Court and its staff.”⁷ Plaintiff claims that he “was injured when he paid the purchase price or a price premium for the [At-Issue Products] that did not deliver what was promised,” and because the At-Issue Products “have no or de minimis value based on the presence of the alleged heavy metals, pentobarbital, toxins, BPA, and/or unnatural or other ingredients that do not conform to the labels, packaging, advertising, and statements.”⁸ Plaintiff seeks damages based on his claim that the alleged misrepresentations and omissions “caused the [At-Issue Products] to be of diminished value.”⁹

9. On August 13, 2019, Dr. Jon Krosnick (“Dr. Krosnick”) and Mr. Colin Weir (“Mr. Weir”) submitted expert reports on behalf of Plaintiff in this matter (the “Krosnick Report” and “Weir Report,” respectively).¹⁰

happy, healthy, and strong.” Third Amended Complaint, ¶¶ 1, 10–12, 16, 79–96, 124. Plaintiff also alleges “Defendants have represented that their DogStar Kitchens meet the European Union’s standard for pet food... However, contrary to Defendant’s assertion, they do not meet the European Union standards for pet foods.” Third Amended Complaint, ¶¶ 101–102.

⁶ Third Amended Complaint, ¶ 126. See also ¶¶ 28, 70.

⁷ Memorandum of Points and Authorities in Support of Plaintiff’s Motion for Class Certification, *Scott Weaver v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 2:18-cv-01996-JPS, August 15, 2019, pp. 8–9.

⁸ Third Amended Complaint, ¶ 21–22. See also ¶¶ 112, 126.

⁹ Declaration of Colin B. Weir, August 13, 2019 (“Weir Report”), ¶ 3.

¹⁰ Expert Report of Dr. Jon A. Krosnick, August 13, 2019 (“Krosnick Report”); Weir Report. Note that the Krosnick Report is divided into two parts, each describing a different survey. Krosnick Report, pp. 1, 336. For clarity, where necessary, I will refer to Part 1 of the Krosnick Report as “Krosnick Report Part 1,” and to Part 2 of the Krosnick Report as “Krosnick Report Part 2.”

10. The Krosnick Report describes the design, implementation, and analysis of two consumer surveys. In one survey (“Diminution in Value Survey”), Dr. Krosnick attempted to estimate the decrease in “value” of the At-Issue Products due to the disclosure of between one and eight “corrective statements” (“Alleged Corrective Statements”) referring to heavy metals, BPA, use of fresh and regional ingredients, and sourcing from third parties.¹¹ In the other survey (“Pentobarbital Survey”), he attempted to test the impact of two specific messages about the alleged presence (or risk of presence) of pentobarbital in certain Champion dog food products¹² (“Alleged Pentobarbital Corrective Statements”) on “evaluations of the quality and healthiness” of those products.¹³

11. In his report, Mr. Weir describes his estimation of two types of damages: Diminution in Value Damages and Illegal Sales Damages.¹⁴ Mr. Weir uses the “diminution in value factor” generated by Dr. Krosnick’s Diminution in Value Survey as an input into his proposed method of calculating his Diminution in Value Damages.¹⁵ Mr. Weir estimates his Illegal Sales Damages for the At-Issue Products subject to the pentobarbital allegations by simply assuming that the sales of these products should never have occurred. Mr. Weir uses his estimate of all dollar sales of the relevant products when estimating Illegal Sales Damages.¹⁶ The data generated by Dr. Krosnick’s Pentobarbital Survey therefore, is not used as an input to Mr. Weir’s Illegal Sales Damages estimate.

III. Assignment and Materials Relied Upon

12. I was asked by counsel for Champion to review and evaluate Dr. Krosnick’s report and survey instruments.¹⁷ I was also asked to describe generally the various factors that may be considered by different consumers when deciding whether to purchase dry and freeze-dried dog food products.

¹¹ Krosnick Report Part 1, ¶¶ 78–79.

¹² ORIJEN Regional Red, ACANA Appalachian Ranch, and ACANA Heritage Red Meat are the At-Issue Products subject to the pentobarbital allegations.

¹³ Krosnick Report Part 2, ¶ 47.

¹⁴ Weir Report, ¶¶ 8–9.

¹⁵ Weir Report, ¶ 4.

¹⁶ Weir Report, ¶¶ 39–40.

¹⁷ Counsel for Champion retained me as an expert witness in the class action case *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-494. I submitted two separate expert reports in that matter on December 7, 2018 and January 11, 2019, respectively. Counsel for Champion also retained me as an expert witness in the class action case *Jennifer Reitman and Carol Shoaff v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Central District of California, Western Division, Case No. 2:18-cv-01736-DOC-JPR. I submitted an expert report in that matter on May 13, 2019.

13. In carrying out my assignment, I relied on my experience and expertise as a marketing professor, as well as academic literature, materials produced by the parties in this litigation, deposition testimony, and other materials. Appendix C contains a list of materials I relied upon in forming my opinions in this matter to date.

14. I am being compensated at my standard billing rate of \$900 per hour. Staff at Cornerstone Research, a consultancy, worked under my direction and helped me prepare my report. I receive compensation from Cornerstone Research based on its collected staff billings for its support of me in this matter. Neither my compensation in this matter nor my compensation from Cornerstone Research is in any way contingent or based on the content of my opinion or the outcome of this or any other matter.

15. I hold all of my opinions to a reasonable degree of professional and scientific certainty. My work in this matter is ongoing. I reserve the right to revise or supplement my opinions in light of any additional materials including data, documents, declarations of experts, and deposition or other testimony, or if I am asked to perform further research or analysis.

IV. Summary of Opinions

16. Dr. Krosnick failed to follow standard practices set forth by academics for conducting surveys and experiments, including standards found in his own work in the field. My analysis of Dr. Krosnick's own survey data revealed critical flaws and errors that fatally impact the validity and reliability of his results and conclusions from both of his surveys.

17. I identified the following issues with respect to Dr. Krosnick's Diminution in Value Survey:

- a. Dr. Krosnick's analysis of the Diminution in Value Survey data abstracts away from the specific content of the Alleged Corrective Statements and instead focuses on the effect of the *number* of Alleged Corrective Statements respondents saw. His analysis does not attempt to, and cannot, measure the effect of any one specific corrective statement. Thus, Dr. Krosnick cannot isolate the alleged impact of any of the individual misrepresentations / omissions or any subset of the misrepresentations / omissions the Plaintiff alleges. This renders Dr. Krosnick's Diminution in Value Survey unusable for assessing the impact of each of Plaintiff's claims on the "value" of the At-Issue Products or on consumer perceptions of the quality and healthiness of the At-Issue Products.

- b. Dr. Krosnick failed to sample from the relevant population of interest as his sample is based on the entire U.S. adult population, a population that is not representative of the actual or potential purchasers of the At-Issue Products, the actual or potential purchasers of any Champion products, or the putative class members. Therefore, the results of Dr. Krosnick's Diminution in Value Survey cannot be extrapolated to the putative class members. Further, the results of Dr. Krosnick's Diminution in Value Survey cannot be extrapolated to all At-Issue Products because Dr. Krosnick tested only two out of over seventy packages of At-Issue Products.
- c. Dr. Krosnick's Diminution in Value Survey instrument is methodologically incorrect and unscientific because it lacks a proper control group.
- d. Dr. Krosnick's Diminution in Value Survey cannot and does not estimate a change in market price due to the Alleged Corrective Statements, because:
 - i. The Diminution in Value Survey does not take into account any supply-side factors that are necessary to estimate a market price, including competitors' reactions, Champion's responses to competitors, Champion's costs, and importantly, Champion's willingness to sell.
 - ii. The survey is based on a methodology, contingent valuation, that is heavily debated in the academic community and that, at best, generates willingness to pay estimates.
 - iii. Dr. Krosnick at best estimates the *average* decrease in willingness to pay across respondents and ignores heterogeneity across respondents.
 - iv. Dr. Krosnick's estimation methodology—the so-called “Lewbel-Watanabe Approach,” a methodology that is not widely accepted in the academic community—is typically used to estimate willingness-to-pay for a *non-market* good (or a good that is not traded and that does not have a market price).
- e. Dr. Krosnick's Alleged Corrective Statements use negative and potentially alarming language, and lack critical information about the level and likelihood of the presence of heavy metals and BPA in the dog food products respondents saw in the survey. As such, the statements do not provide information that is

adequately specific to the facts of this case or adequately “correct” the allegedly omitted information, leaving respondents to make their own assumptions about the missing information. In addition, Dr. Krosnick shows his Alleged Corrective Statements to respondents in isolation (*i.e.*, separate from respondents’ review of the products’ packaging) and in a product evaluation setting without the proper context of competitors, thereby artificially increasing respondents’ attention to these statements. All of these flaws in Dr. Krosnick’s Diminution in Value Survey introduce potential biases and are likely to reduce respondents’ responses regarding their likelihood to purchase the products at any specified price.

- f. Lastly, Dr. Krosnick used inappropriate and arbitrary price levels to generate his estimates of decrease in “value” in his Diminution in Value Survey. My analysis of Dr. Krosnick’s data shows that respondents ignored the prices they saw when indicating their purchase intentions.
18. I identified the following issues with respect to Dr. Krosnick’s Pentobarbital Survey:
- a. Dr. Krosnick’s Pentobarbital Survey does not attempt to estimate diminution in value. The survey provides no information about prices and does not ask any questions about purchasing behavior. As such, the survey is irrelevant to the estimation of damages because it is impossible to estimate a diminution of value (if any) related to Plaintiff’s pentobarbital allegations using Dr. Krosnick’s Pentobarbital Survey.
 - b. The results of Dr. Krosnick’s Pentobarbital Survey demonstrate that the Alleged Pentobarbital Corrective Statements had little to no impact on perceptions of the quality and healthiness of the At-Issue Products subject to the pentobarbital allegations for a large portion of respondents. These results are inconsistent with a presumption of uniform negative impact of such statements on purchase decisions for the At-Issue Products. Indeed, Dr. Krosnick’s own survey data demonstrate wide variation in consumer responses to the Alleged Pentobarbital Corrective Statements, suggesting different members of the putative class may react differently when exposed to the same information regarding pentobarbital.
 - c. Dr. Krosnick again failed to sample from the relevant population of interest. His sample in the Krosnick Pentobarbital Survey is based on the entire U.S. adult population, a population that is not representative of the actual or potential

purchasers of the At-Issue Products, the actual or potential purchasers of any Champion products, or the putative class members. As a result, none of the results of Dr. Krosnick's Pentobarbital Survey cannot be extrapolated to the putative class members.

- d. Dr. Krosnick's Alleged Pentobarbital Corrective Statements use negative and potentially alarming language, and do not include critical information about the level and likelihood of the presence of pentobarbital in the dog food products shown to respondents. As such, similar to his other survey, the statements in Dr. Krosnick's Pentobarbital Survey do not provide information that is adequately specific to the facts of this case or adequately "correct" the allegedly omitted information, leaving respondents to make their own assumptions about the missing information. Dr. Krosnick also artificially increases respondents' attention to the Alleged Pentobarbital Corrective Statements due to his decision to show these statements in isolation (*i.e.*, separate from respondents' review of the products' packaging) and in a product evaluation setting without the proper context of competitors. All of these flaws introduce potential biases that are likely to reduce respondents' perceptions of the quality and healthiness of the products they saw in the survey.

19. In addition, the following issues impact both of Dr. Krosnick's surveys and call into question the integrity of the data he collected as well as his analysis of the data:

- a. Dr. Krosnick did not pre-test either of his survey instruments and did not perform any cognitive testing of his Alleged Corrective Statements or his Alleged Pentobarbital Corrective Statements to assess if respondents properly understood the information he provided in his surveys. He also failed to include basic quality control measures such as attention check questions to ensure data integrity.
- b. Dr. Krosnick's analysis contains multiple errors. In particular, he improperly used ordinary least squares regression with binary and ordinal dependent variables, created arbitrary indices without proper justification, and provided no support for the control variables he used in his analysis.

20. Finally, academic research in the fields of marketing and consumer behavior demonstrates that a variety of factors influence consumer purchase decisions and that different consumers place different weights on different purchase factors. These findings

suggest that, for a product such as dog food, the consumer purchase decision-making process would involve a high level of diversity across consumers, a concept also referred to as “heterogeneity.” As a result, Dr. Krosnick cannot reliably assume that the Alleged Corrective Statements or the Alleged Pentobarbital Corrective Statements would influence the purchase decisions of many or all putative class members in the same way. My analysis of the relevant academic and trade literature, as well as testimony from the named Plaintiffs in this litigation and related matters, shows that in order to determine reliably whether and how a specific statement relating to the alleged misrepresentations would have influenced purchase decisions for the products that are at issue, one would need to ask each individual member of the putative class.

V. Dr. Krosnick’s Diminution in Value Survey Is Fundamentally Flawed on Multiple Dimensions, Rendering Its Results Unreliable, and It Cannot Estimate a Change in Market Price

A. Dr. Krosnick’s Diminution in Value Survey

21. Dr. Krosnick designed and conducted a consumer survey to evaluate “[h]ow... learning about the risk of the presence of certain heavy metals (lead, mercury, cadmium, and arsenic) and non-natural substances (BPA) in the foods, learning that the foods were not always made with fresh regional ingredients, and learning that the foods were sometimes made with ingredients from third parties” would impact consumers’ perceptions of the quality and healthiness of the At-Issue Products, as well as the economic value of the At-Issue Products.¹⁸

22. In his Diminution in Value Survey, Dr. Krosnick first showed respondents images and text from all sides of the packaging of either ORIJEN Six Fish or ACANA Duck and Pear Singles.¹⁹ Specifically, each respondent saw an image of one side of the package to which they were assigned, and then a written list of the words that were depicted on that side of the package.²⁰ This process of first showing an image of a side of the package and then a list of the text in the image was repeated for all four sides of the packaging of the products.²¹

¹⁸ Krosnick Report Part 1, ¶ 47.

¹⁹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 8–9 and Appendix B, pp. 223–249.

²⁰ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 9 and Appendix B, pp. 223–227.

²¹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, pp. 223–249.

23. Dr. Krosnick then showed respondents “between zero and eight pieces of additional information,” that were intended to “correct alleged misinformation on the Champion packaging.”²²

24. In order to evaluate Plaintiff’s claims that the At-Issue Products include potentially harmful levels of arsenic, mercury, lead, cadmium, and/or BPA,²³ Dr. Krosnick used the following Alleged Corrective Statements that were provided to him by Plaintiff’s counsel:

Laboratory testing has shown there is a risk that this food may contain arsenic. The Environmental Protection Agency has said, “Arsenic has been linked to a number of cancers. These include cancer of the bladder, lungs, skin, kidney, nasal passages, liver, and prostate.”²⁴

Laboratory testing has shown there is a risk that this food may contain mercury. The World Health Organization has said that in humans, “Mercury may have toxic effects on the nervous, digestive and immune systems, and on lungs, kidneys, skin and eyes.”²⁵

Laboratory testing has shown there is a risk that this food may contain lead. The Food & Drug Administration has said, “Lead is poisonous to humans and can affect people of any age or health status.”²⁶

Laboratory testing has shown there is a risk that this food may contain cadmium. A federal public health agency of the U.S. Department of Health and Human Services, has found, “Kidney and bone effects have also been observed in laboratory animals ingesting cadmium. Anemia, liver disease, and nerve or brain damage have been observed in animals eating or drinking cadmium.”²⁷

Laboratory testing has shown there is a risk that this food may contain BPA. The Food & Drug Administration has said, “BPA is an industrial chemical used to make polycarbonate, a hard, clear plastic, which is used in many consumer products.”²⁸

²² Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10. These statements were provided to Dr. Krosnick by Plaintiff’s counsel.

²³ Third Amended Complaint, ¶ 6.

²⁴ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 199.

²⁵ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 198.

²⁶ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 198.

²⁷ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 198.

²⁸ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 199.

25. In order to evaluate Plaintiff's claims that Champion misrepresented the At-Issue Products as "'Biologically Appropriate' foods that use 'Fresh Regional Ingredients' consisting only of meat, poultry, fish, and vegetables,'"²⁹ Dr. Krosnick used the following Alleged Corrective Statements that again were provided to him by Plaintiff's counsel:³⁰

The manufacturer of this food has stated that it may include ingredients that are not are delivered to them fresh but have been frozen before they are used to make the dog food.³¹

The manufacturer of this food has stated that it may include ingredients that are sourced outside the region where it is manufactured. This may include not only other regions within the United States but also other regions internationally.³²

The manufacturer of this food has stated that it uses third parties to process and manufacture protein meals and tallows used in its dog foods.³³

26. Dr. Krosnick then asked respondents whether they would purchase the product they have seen at a specific price point.³⁴

If you were buying dog food today, and the 13 pound bag of dog food you just saw is available at a price of \$55.99, would you buy it, or would you not buy it?³⁵

27. According to Dr. Krosnick, he used five price points for each product including the manufacturer's suggested retail price ("MSRP") for that product and prices "about 10 percent below, about 5 percent below, about 5 percent above, and about 10 percent above" the MSRP

²⁹ Third Amended Complaint, ¶ 71.

³⁰ Note that Dr. Krosnick did not test the alleged impact of the phrase "biologically appropriate" or any other affirmative statement Champion made on the packages. Additionally, Dr. Krosnick did not test the alleged impact of Plaintiff's claims that the At-Issue Products do not meet European Union Standards, or the alleged risk that the At-Issue Products are associated with DCM. Dr. Krosnick's Diminution in Value Survey therefore provides no information on consumer reactions relating to any of these allegations.

³¹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 199.

³² Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 199.

³³ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, p. 199.

³⁴ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 11–15 and Appendix B, pp. 199–201.

³⁵ Two possible responses Dr. Krosnick provided to his respondents for this question were: "Would buy it" and "Would not buy it." See Krosnick Report Part 1, Appendix B, pp. 251–253.

for that product.³⁶ Dr. Krosnick randomly assigned those respondents who received the product purchase question to the price points they saw.

28. Then, Dr. Krosnick posed questions to respondents about the “quality” of the dog food they saw, and whether they thought the dog food they saw was “healthy.”³⁷

Subsequently, Dr. Krosnick asked up to 58 additional questions “about [respondents’] experiences owning dogs as well as some questions about their own lifestyle and demographics.”³⁸ These questions ranged from questions such as “how well has your dog understood what you said to it?” to questions about whether the respondent has purchased organic food in the past month and to questions about the respondent’s age, gender, education, and household income.³⁹

29. Dr. Krosnick then analyzed, using ordinary least square regression, whether the *number* of Alleged Corrective Statements a respondent saw could predict the respondent’s response to the purchase question (*i.e.*, whether it could predict if the respondent would choose to purchase (or not purchase) the product they were provided information about at the specified price level).⁴⁰ After finding a negative and statistically significant relationship between the number of Alleged Corrective Statements and whether the respondents would choose to purchase (or not purchase) the product they saw (*i.e.*, respondents were less likely to indicate they would buy the product the more Alleged Corrective Statements that they saw), Dr. Krosnick then used what he referred to as the “Lewbel-Watanabe estimation approach”—based on two distinct papers, one by Arthur Lewbel (2000) and one by Masahide Watanabe (2010)⁴¹—to estimate “the impact of the number of corrective statements on the value attached to the product.”⁴² According to Dr. Krosnick’s estimates, exposure to one Alleged Corrective Statement would “decrease the value” of the relevant At-Issue Product by 10.7% of the respective product’s MSRP, whereas exposure to seven or eight Alleged

³⁶ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 14.

³⁷ Krosnick Report Part 1, Appendix B, pp. 253–254.

³⁸ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 16 and Appendix B, pp. 254–288. Some questions were not posed to all respondents. For example, respondents who indicated that they did not currently own a dog were not asked the questions about dog ownership. The majority of these questions do not appear anywhere in Dr. Krosnick’s analysis, while some are used for constructing control variables.

³⁹ Krosnick Report Part 1, Appendix B, pp. 254–288.

⁴⁰ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 32.

⁴¹ Lewbel, A. (2000), “Semiparametric Qualitative Response Model Estimation with Unknown Heteroscedasticity or Instrumental Variables,” *Journal of Econometrics*, 97, 1, 145–177; Watanabe, M. (2010), “Nonparametric Estimation of Mean Willingness to Pay from Discrete Response Valuation Data,” *American Journal of Agricultural Economics*, 92, 4, 1114–1135.

⁴² Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 34–36.

Corrective Statements would lead to a “[d]ecrease in the [v]alue” of the relevant At-Issue Product by 54.8% or 59.6%, respectively, of the particular product’s MSRP.⁴³

30. Mr. Weir used the “Percent Decrease in Value” associated with including seven or eight Alleged Corrective Statements estimated by Dr. Krosnick as an input to his proposed approach for calculating Diminution in Value Damages.⁴⁴

31. As I explain below, there are multiple fatal flaws with Dr. Krosnick’s Diminution in Value Survey that render it unreliable and demonstrate that the data generated by Dr. Krosnick’s Diminution in Value Survey cannot support a conclusion that disclosure of the Alleged Corrective Statements “decreased the value of the [At-Issue Products] by measurable amounts,” or that such disclosures “decreased the perceived quality and healthiness of the [At-Issue Products].”⁴⁵ Accordingly, Mr. Weir’s estimate of Diminution in Value Damages, which relies on the results of Dr. Krosnick’s Diminution in Value Survey for crucial inputs, cannot provide reliable estimates of damages to the putative class members. In the following sections, I address these flaws in turn.

B. Dr. Krosnick’s Diminution in Value Survey Design Is Not Equipped to Measure Diminution in “Value” Alleged by Plaintiff

1. Dr. Krosnick Conflates the Number of Alleged Corrective Statements with the Content of Alleged Corrective Statements and His Survey Lacks a Proper Control Group

32. Dr. Krosnick’s conclusions from the Diminution in Value Survey do not relate to the specific content of the alleged misrepresentations and omissions (*e.g.*, that the At-Issue Products allegedly contained heavy metals and BPA), and instead are based on the *number* of the Alleged Corrective Statements Dr. Krosnick uses in his survey.⁴⁶ For example, Dr. Krosnick’s conclusions regarding the impact of viewing four Alleged Corrective Statements does not depend on which four statements were viewed. In other words, Dr. Krosnick’s survey does not measure the impact of information about the alleged presence or risk of

⁴³ Krosnick Report Part 1, ¶ 79.

⁴⁴ Weir Report, ¶¶ 35–37. Specifically, Mr. Weir suggests multiplying Dr. Krosnick’s percent decrease in value estimates corresponding to inclusion of seven or eight Alleged Corrective Statements on the product’s packaging, with his own estimate of total sales volume of the At-Issue Products.

⁴⁵ Krosnick Report Part 1, ¶ 78.

⁴⁶ The Alleged Corrective Statements were provided to Dr. Krosnick by Plaintiff’s counsel. Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10. Deposition of Dr. Jon A. Krosnick, May 8, 2019 (“Krosnick May 8, 2019 Deposition”), p. 20:10-14.

presence of certain contaminants and other misrepresentations about the product ingredients on the market price of the At-Issue Products.^{47, 48} Thus, Dr. Krosnick's analysis fails to provide a relevant measure of the claimed harm in this matter.

33. By analyzing the *number* of Alleged Corrective Statements, Dr. Krosnick implicitly assumes that respondents react to each of the Alleged Corrective Statements in the same way and in the same magnitude. This means that in Dr. Krosnick's analysis, the effect of seeing, for example, an Alleged Corrective Statement about arsenic and an Alleged Corrective Statement about using third parties to process and manufacture protein meals would be identical. This also means that Dr. Krosnick's analysis forces the effect of seeing four Alleged Corrective Statements to be the same regardless of which four Alleged Corrective Statements a respondent saw. In fact, Dr. Krosnick testified that the "diminution of value" he estimated for a given number of Alleged Corrective Statements did not depend in any way on which specific statement(s) the person saw and that there was no "significant difference" between the effects of any of the eight different Alleged Corrective Statements that he used.⁴⁹

34. Even assuming that the relevant measure of the alleged impact could be determined by analyzing the number of pieces of information that properly relate to the allegations, Dr.

⁴⁷ This is also true in the event that the Court dismisses any of the alleged misrepresentations such as the Court's order in this matter dismissing the heavy metals claims. That is, Dr. Krosnick's Diminution in Value Survey fails to provide a relevant measure of the claimed harm in this matter regardless of how many and which of the Plaintiff's claims are accepted by the Court. Additionally, without the heavy metals allegations, any respondent who viewed an Alleged Corrective Statement regarding heavy metals would need to be removed from the analysis. This is because it would be impossible to separate the influence on respondents of the heavy metals Alleged Corrective Statements from the remaining Alleged Corrective Statements. I understand that the Court dismissed Plaintiff's allegations related to the presence of heavy metals in Champion products under the Wisconsin Deceptive Trade Practices Act. "In sum, [Plaintiff] states that Defendants market their products as being of premium quality. They did so knowing that their assertions were false because of the presence of contaminants, or the risk of the presence of contaminants. This was to the detriment of consumers, who would not have purchased the products at a price premium (or at all) if they had known about the contaminants. The Court continues to believe, as it did in *Loeb II*, that this theory is not viable with respect to any of the naturally occurring substances allegedly present in the products...All pet (and human) foods contain at least some tiny amount of heavy metals. Plaintiff...insists that the mere presence of heavy metals defeats Defendants' quality claims. If this were true, the results would be preposterous. No one would sell foodstuffs in Wisconsin....Plaintiff may not proceed on Count One [violation of the Wisconsin Deceptive Trade Practices Act] with respect to heavy metals, but his claim will survive as to BPA, pentobarbital, and the alleged use of non-regional and non-fresh ingredients." Order on Motion to Dismiss Plaintiff's Second Amended Complaint, *Scott Weaver v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 2:18-cv-1996-JPS, July 1, 2019, pp. 6-7, 15. Emphasis in original.

⁴⁸ I discuss in detail further below that Dr. Krosnick's Diminution in Value Survey cannot measure market price, and due to a large number of flaws in survey design and model estimation, Dr. Krosnick's Diminution in Value Survey results are unreliable.

⁴⁹ "Q. Okay. Did you do anything to determine, of the eight, which had the most impact when they only saw one statement? A. Yes. Q. And where do I see the results of that? A. There - I saw no significant difference in the impact of the statements, so there is no analysis reported here in this report on that matter." Krosnick May 8, 2019 Deposition, pp. 65:15-67:19.

Krosnick's Diminution in Value Survey still fails to generate reliable results due to its lack of a proper control group.⁵⁰ Therefore, Dr. Krosnick's Diminution in Value Survey is based on an unscientific methodology and it is fundamentally flawed.

35. A properly designed survey experiment compares a control group to a treatment group.⁵¹ According to Diamond (2011), in a survey experiment,

[R]espondents are assigned randomly to one of two conditions. For example, respondents assigned to the experimental condition view an allegedly deceptive commercial, and respondents assigned to the control condition either view a commercial that does not contain the allegedly deceptive material or do not view any commercial.⁵²

36. In the context of Dr. Krosnick's study, this would imply that the treatment group (or experimental condition) would include all respondents who viewed one or more of the Alleged Corrective Statements, and the control group (or control condition) would include all respondents who did not view any Alleged Corrective Statements (simulating what happened in the real world or what the Plaintiff is challenging). Dr. Krosnick did not follow this standard approach to designing an experiment. He has no proper baseline, representing the real world experiences of consumers, to compare with his but-for world of consumers seeing the Alleged Corrective Statements. Table 1 below shows the share of respondents who saw zero to eight Alleged Corrective Statements. It is striking that only 23 people out of 6,728 respondents, or 0.34% of Dr. Krosnick's total sample, saw zero Alleged Corrective Statements.⁵³ Thus, it is not possible to conduct any proper statistical analysis of Dr.

⁵⁰ Dr. Krosnick claims that: "propositions were tested by randomly assigning respondents to read one of 256 combinations of corrective statements about a dog food. For each of 8 corrective statements, half of the respondents were the control group, meaning that they did not see that statement, and the other half of the respondents were the treatment group, meaning that they did see the corrective statement." Krosnick Report Part 1, ¶ 66. This approach does not constitute using a control group because Dr. Krosnick uses respondents who saw other Alleged Corrective Statements as a control, which is inappropriate. Respondents who saw any Alleged Corrective Statements cannot be used as a control because they may be influenced by the Alleged Corrective Statements that they did see. I note that, in his deposition, Dr. Krosnick stated that "there isn't really a control group" because "it's not the design." Krosnick May 8, 2019 Deposition, p. 97: 8–11. Dr. Krosnick could have assigned a ninth of his sample to receive zero corrective statements. This would have allowed for a comparison of each Alleged Corrective Statement or a combination of all or some of the Alleged Corrective Statements to a control group who saw zero Alleged Corrective Statements.

⁵¹ Diamond, S. S. (2011), "Reference Guide on Survey Research," in *Reference Manual on Scientific Evidence*, Washington, D.C.: The National Academies Press, 359–424 ("Diamond (2011)") at p. 398; *see also* Barabas, J. and J. Jerit (2010), "Are Survey Experiments Externally Valid?" *American Political Science Review*, 104, 2, 226–242.

⁵² Diamond (2011), p. 398.

⁵³ Furthermore, there is only one respondent who reported that they ever purchased ACANA or ORIJEN dog food products and saw zero Alleged Corrective Statements, and none who saw all eight Alleged Corrective

Krosnick's Diminution in Value Survey data due to the limited sample size of the control group.

Table 1
Distribution of Number of Alleged Corrective Statements that
Respondents of Dr. Krosnick's Diminution in Value Survey Saw

Number of Alleged Corrective Statements	Number of Respondents	Percent of Respondents	Number of Respondents Who Purchased ACANA or ORIJEN Dog Food
0	23	0.34%	1
1	227	3.37%	17
2	716	10.64%	43
3	1,467	21.80%	85
4	1,864	27.71%	97
5	1,466	21.79%	96
6	732	10.88%	52
7	210	3.12%	14
8	23	0.34%	0

Source: Krosnick Backup Materials

37. That Dr. Krosnick conducted the analysis in this manner, and the lack of statistically significant differences between the statements in terms of how they affect “value,” per his deposition testimony, demonstrates that Dr. Krosnick’s results are not driven by the content of the Alleged Corrective Statements he provided to his respondents. Instead, as I discuss below, his results are likely a design artifact from forcing respondents to click through multiple negative (and in some cases extremely negative) statements about a product that the vast majority of Dr. Krosnick’s respondents either have not previously purchased or would never consider purchasing.⁵⁴

Statements. According to Gerber and Green (2012), “When the potential outcomes have different variances, invest additional observations to the experimental condition with greater variance.... In practice, however, researchers seldom know in advance which group is likely to have more variance and therefore place equal numbers of subjects in each condition.” See Gerber, A. S. and D. P. Green (2012), *Field Experiments: Design, Analysis, and Interpretation*, New York, NY: W. W. Norton & Company, Inc., 58–59. Dr. Krosnick’s treatment-control distribution is what we would expect to see if one were to assign a 50% probability of receiving *each* treatment. This means that the probability of receiving zero Alleged Corrective Statements (or eight) is the same as getting heads on eight consecutive coin flips, which corresponds to a 0.39% probability (or $0.5^8 = 0.39\%$). This is almost exactly the outcome observed in Dr. Krosnick’s Diminution in Value Survey data, with about 0.34% of respondents who saw zero or all eight of the Alleged Corrective Statements. As Table 1 shows, the large majority of the respondents saw between 3 and 5 Alleged Corrective Statements—this is equivalent to getting between 3 and 5 heads out of eight coin flips.

⁵⁴ As I discuss in more detail below, Dr. Krosnick’s Alleged Corrective Statements regarding the heavy metal and BPA content of the At-Issue Products (in particular) include descriptors that would be evaluated negatively by the consumers about any product, let alone a food product. These descriptors include being linked to cancer, nerve or brain damage, and descriptors such as “toxic,” “poisonous,” and “industrial chemical.” Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10; Appendix B, pp. 198–199.

2. Dr. Krosnick's Measure of "Value" Does Not Relate to and Cannot Approximate Market Prices

38. Dr. Krosnick estimated a measure of percent decrease in "value" where his concept of "value" corresponds to an average *willingness to pay* across his respondents.⁵⁵ Dr. Krosnick is generally ambiguous about the definition of "value" he claims to have estimated and provides a definition of willingness to pay during his deposition that is not consistent with how that term is defined and used in the fields of economics and marketing.⁵⁶ With respect to his "value" concept, Dr. Krosnick testified in his deposition that:

[I]f I walk into a store and I purchase a candy bar for \$3, you've observed that I was willing to pay \$3 for that candy bar, and that \$3 is what we call a lower-bound estimate of the value of the candy bar to the individual. In other words, if -- if I gave up that much, it's worth at least that much to me. It may have been worth 3.50. If it --they had charged 3.50, I might have relieved that.⁵⁷

Per this description, the "value" concept Dr. Krosnick tries to estimate is therefore nothing more than the maximum price an individual would be willing to pay when deciding whether to purchase a product—which is the precise definition of willingness to pay in academic literature.⁵⁸ If the product price is less than this maximum amount, the individual would purchase the product, if not they would not buy.

39. The literature Dr. Krosnick bases his analysis upon further confirms that his analysis is designed to arrive at a willingness to pay measure.⁵⁹ In fact, the Watanabe paper that

⁵⁵ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 34; Krosnick May 8, 2019 Deposition, pp. 13:20–14:6.

⁵⁶ According to Dr. Krosnick, "Willingness to pay is – is revealed in behavior when consumers engage in transactions. So by going to a store and purchasing a candy bar for \$3, the individual reveals a willingness to pay of \$3, which provide a lower-bound estimate of the economic value of the good to the individual. The value could be higher than that willingness to pay that was revealed in that particular transaction at that particular price, but we know that it is at least that much, by definition, because the individual revealed a willingness to pay of [*sic*] that amount." Krosnick May 8, 2019 Deposition, pp. 13:20–14:6.

⁵⁷ Krosnick May 8, 2019 Deposition, pp. 10:23–11:6.

⁵⁸ For example, Greg Mankiw's *Principles of Microeconomics* explains this clearly: "Each buyer's maximum [price that he would pay] is called his willingness to pay, and it measures how much that buyer values the good. Each buyer would be eager to buy the album at a price less than his willingness to pay, and he would refuse to buy the album at a price greater than his willingness to pay. At a price equal to his willingness to pay, the buyer would be indifferent about buying the good: If the price is exactly the same as the value he places on the album, he would be equally happy buying it or keeping his money." Mankiw, N. G. (2008), *Principles of Microeconomics*, Mason, OH: South-Western Cengage Learning, p. 138. Allenby, G. M., et al. (2014), "Economic Valuation of Product Features," *Quantitative Marketing and Economics*, 12, 421–456, at p. 430.

⁵⁹ Watanabe, M. (2010), "Nonparametric Estimation of Mean Willingness to Pay from Discrete Response Valuation Data," *American Journal of Agricultural Economics*, 92, 4, 1114–1135; Lewbel, A. (2000), "Semiparametric Qualitative Response Model Estimation with Unknown Heteroscedasticity or Instrumental Variables," *Journal of Econometrics*, 97, 1, 145–177. Watanabe (2010) "develops a nonparametric method to

serves as the basis for Dr. Krosnick's estimation approach includes the phrase "Mean Willingness to Pay" in its title, and the first sentence of the paper's abstract states that: "This article develops a nonparametric method to consistently estimate mean willingness to pay (WTP) in various discrete response valuation methods."⁶⁰

40. Both academic literature and leading industry practitioners make a clear distinction between willingness to pay and market prices.⁶¹ Academic findings show that neither individual willingness to pay nor average willingness to pay defines the price at which a product is sold in the marketplace and that willingness to pay estimates typically overstate the actual changes to market prices. For example, Hausman (2012) finds that:

When hypothetical questions are asked about willingness to pay, the results tend to be upward-biased. This fact is well-known. For example, Jamieson and Bass (1989) studied people's stated intentions to purchase new products, and found that such measures were overstated.⁶²

41. In addition, Dr. Krosnick's method, when executed properly, at best may estimate an *average* willingness to pay *across respondents*. Dr. Krosnick testified to this, and it is stated throughout the Technical Appendix related to Dr. Krosnick's Diminution in Value Survey.⁶³ Furthermore, the Watanabe paper Dr. Krosnick heavily relies upon for his methodology also clearly indicates that the procedure is intended to estimate an *average* willingness to pay.⁶⁴

consistently estimate mean willingness to pay in various discrete response valuation methods." Lewbel (2000) offers a general method for estimating certain types of choice models, one application of which is estimating willingness to pay (see pp. 149–150). Dr. Krosnick describes his method as the Lewbel-Watanabe approach, citing these two papers. Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 34. Dr. Krosnick also explained in deposition that his methodology is "derived from a method originally proposed by an economist named Turnbull... [and that] the logic of the Turnbull method... is to provide the average willingness to pay, or the average value of the good for the sample of respondents..." Krosnick May 8, 2019 Deposition, pp.115:9–10, 117:21–24.

⁶⁰ Watanabe, M. (2010), "Nonparametric Estimation of Mean Willingness to Pay from Discrete Response Valuation Data," *American Journal of Agricultural Economics*, 92, 4, 1114–1135 at p. 1114.

⁶¹ See, e.g., Allenby, G. M., et al. (2014), "Valuation of Patented Product Features," *The Journal of Law and Economics*, 57, 3, 629–663 at p. 652; Allenby, G. M., et al. (2014), "Economic Valuation of Product Features," *Quantitative Marketing and Economics*, 12, 421–456 at pp. 424, 449; Allenby, G., et al. (2013), "Using Conjoint Analysis to Determine the Market Value of Product Features," *Proceedings of the Sawtooth Software Conference*, 341–355 at p. 342; Orme, B. K. (2014), *Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research*, Manhattan Beach, CA: Research Publishers, 88–92.

⁶² Hausman, J. (2012), "Contingent Valuation: From Dubious to Hopeless," *Journal of Economic Perspectives*, 26, 4, 43–56 at p. 44.

⁶³ Krosnick May 8, 2019 Deposition, p. 112:14–17; "This expression is the basis for nonparametric estimation of mean value." See Krosnick Report Part 1, Appendix E, p. 328.

⁶⁴ See ¶ 39 above; Watanabe, M. (2010), "Nonparametric Estimation of Mean Willingness to Pay from Discrete Response Valuation Data," *American Journal of Agricultural Economics*, 92, 4, 1114–1135 at p. 1114.

42. Basic economics holds that the market equilibrium price for a product is the price at which the demand curve and the supply curve intersect.⁶⁵ In other words, one must estimate a but-for demand curve and a but-for supply curve in order to estimate a but-for market price. Dr. Krosnick's Diminution in Value Survey is not equipped to incorporate any supply-side factors, and during his deposition on May 8, 2019, Dr. Krosnick admitted that his analysis did not consider the cost of producing Champion products or any other supply-side factors.⁶⁶ It is incorrect to ignore the supply-side factors that would be different in the but-for world than they were in the actual world. Any changes to the actual product (*i.e.*, a but-for product with different disclosures and statements) could be associated with different marketing, production, or other choices.⁶⁷ Additionally, the response of competitors to this but-for product must be accounted for along with Champion's response to this response. All of these factors impact the ultimate quantity of the but-for product supplied in the but-for world, and more generally, the supply curve (or willingness to sell) for Champion. None of these factors are considered, analyzed, or estimated by Dr. Krosnick.

43. In addition, Dr. Krosnick's methodology appears to be a form of contingent valuation.⁶⁸ In describing a standard contingent valuation study, Dr. W. Michael Hanemann states that:

[M]ost major contingent valuation studies have used closed ended questions like "If it cost \$x, would you be willing to pay this amount?" or "If it cost \$x, would you vote for this?" Different people are confronted with different dollar amounts. Plotting the proportion of "yes" responses against the dollar amount traces out the cumulative distribution function of willingness-to pay.⁶⁹

⁶⁵ As stated in all elementary economics textbooks, market price is determined at the point where market demand equals market supply. *See, e.g.*, Varian, H. R. (1992), "Competitive Markets," in *Microeconomic Analysis*, New York, NY: W. W. Norton & Company, Inc., 215–232 at p. 219; Mas-Colell, A., et al. (1995), "Competitive Markets," in *Microeconomic Theory*, New York, NY: Oxford University Press, Inc., 311–349 at p. 320; Goolsbee, A., et al. (2013), "Supply and Demand," in *Microeconomics*, New York, NY: Worth Publishers, 13–59 at p. 25.

⁶⁶ Krosnick May 8, 2019 Deposition, pp. 112:22–114:14.

⁶⁷ Note that Dr. Krosnick does not present a but-for product in his survey. He presents the actual product and then "additional information" about it. This is not how additional disclosures would be communicated in the but-for world. Therefore, Dr. Krosnick's survey does not yield a valid estimate of the demand for a but-for product because no but-for product is presented to the survey respondents. Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10.

⁶⁸ Specifically, Dr. Krosnick's methodology appears to be a dichotomous choice contingent valuation. Hanemann, M., J. Loomis, and B. Kanninen (1991), "Statistical Efficiency of Double-Bounded Dichotomous Choice Contingent Valuation," *American Journal of Agricultural Economics*, 73, 4, 1255–1263 at p. 1255.

⁶⁹ Hanemann, W. M. (1994), "Valuing the Environment through Contingent Valuation," *Journal of Economic Perspectives*, 8, 4, 19–43 at p. 23.

44. This is of course what Dr. Krosnick does in his Diminution in Value Survey: “After reading the corrective statements, respondents who indicated they had ever owned a dog were asked whether they would buy the product at a specified price.”⁷⁰ It should also be noted that Dr. Krosnick refers to his estimation method as the “Lewbel-Watanabe Approach”⁷¹ and that the abstract of Watanabe (2010) states that the method described in the paper is “applicable to single-bounded and double-bounded contingent valuation.”⁷² In sum, it seems clear that Dr. Krosnick’s method is a variation on contingent valuation.

45. It is also worth noting that the validity of contingent valuation is heavily debated in the academic community, even with respect to its capability to properly measure actual average willingness to pay. One of the most well-known criticisms of contingent valuation comes from a 2012 peer-reviewed article by Dr. Jerry Hausman (“Dr. Hausman”) entitled “Contingent Valuation: From Dubious to Hopeless.”⁷³ In the article, Dr. Hausman states that:

Indeed, I believe that respondents to contingent valuation surveys are often not responding out of stable or well-defined preferences, but are essentially inventing their answers on the fly, in a way which makes the resulting data useless for serious analysis.⁷⁴

Johnston (2006) is similarly critical of the contingent valuation methodology stating that, “most research finds significant divergence between stated and actual behaviors” solicited in contingent valuation survey settings.⁷⁵

46. In conclusion, even if Dr. Krosnick’s Diminution in Value Survey and analysis were properly designed and implemented—which they are not—his methodology cannot and does

⁷⁰ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 11.

⁷¹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 34.

⁷² Watanabe, M. (2010), “Nonparametric Estimation of Mean Willingness to Pay from Discrete Response Valuation Data,” *American Journal of Agricultural Economics*, 92, 4, 1114–1135. Dr. Krosnick testified that his method was a “between-subject experiment” while also comparing his method to a “simplified” version of a conjoint analysis. Krosnick May 8, 2019 Deposition, pp. 99:23–102:5. A “between-subject experiment” is simply an experiment where “each individual is exposed to only one treatment,” in contrast to a “within-subject” experiment where “each individual is exposed to more than one of the treatments being tested.” Charness, G., Gneezy, U. and Kuhn, M. A. (2012), “Experimental Methods: Between-Subject and Within-Subject Design,” *Journal of Economic Behavior & Organization*, 81, 1, 1–8. Thus, Dr. Krosnick’s testimony that his technique is a “between-subject experiment” provides very little information about the method he is using.

⁷³ Hausman, J. (2012), “Contingent Valuation: From Dubious to Hopeless,” *Journal of Economic Perspectives*, 26, 4, 43–56.

⁷⁴ Hausman, J. (2012), “Contingent Valuation: From Dubious to Hopeless,” *Journal of Economic Perspectives*, 26, 4, 43–56, at p. 43.

⁷⁵ Johnston, R. J. (2006), “Is Hypothetical Bias Universal? Validating Contingent Valuation Responses Using a Binding Public Referendum,” *Journal of Environmental Economics and Management*, 52, 1, 469–481 at p. 469.

not estimate a change in *market prices* of At-Issue Products associated with the alleged impact of information about the presence, or risk of presence, of heavy metals, BPA, and information about the freshness and sourcing of ingredients. Because Dr. Krosnick does not estimate an impact on *market prices*, his estimate is not connected to Plaintiff's theory of damages.⁷⁶ Furthermore, there are serious questions in the academic community regarding the validity of any average willingness to pay measure that Dr. Krosnick's methodology can generate.

3. Dr. Krosnick Did Not Survey the Relevant Population

47. One of the fundamental requirements in proper survey design is the identification of an appropriate universe or population. Dr. Krosnick frames his report as following a series of questions listed by Diamond (2011) "that should be asked about any survey evidence that is submitted for a court's consideration."⁷⁷ Three of these questions regard the survey population.⁷⁸ In particular, when addressing the question "*Was an Appropriate Universe or Population Identified?*?" Diamond (2011) states that:

The definition of the relevant population is crucial because there may be systematic differences in the responses of members of the population and nonmembers. For example, consumers who are prospective purchasers may know more about the product category than consumers who are not considering making a purchase.⁷⁹

However, when attempting to address this question, Dr. Krosnick explains that: "[f]or this survey, the population is all adults living in the United States, age 18 and older."⁸⁰

48. Dr. Krosnick's Diminution in Value Survey violates Diamond (2011)'s requirements. The population selected by Dr. Krosnick is irrelevant because it is inconsistent with the putative class definition, which includes the following individuals:

⁷⁶ "As a result of Defendants' conduct, Plaintiff and the Class have suffered actual damages in that they purchased Contaminated Dog Foods that were worth less than the price they paid..." Third Amended Complaint, ¶ 175.

⁷⁷ Krosnick Report Part 1, ¶ 46 citing Diamond (2011).

⁷⁸ The questions are "*Was an Appropriate Universe or Population Identified?*" "*Did the Sampling Frame Approximate the Population?*" and "*Does the Sample Approximate the Relevant Characteristics of the Population? What Is the Evidence That Nonresponse Did Not Bias the Results of the Survey?*" Krosnick Report Part 1, ¶¶ 52–54; Krosnick Report Part 2, ¶¶ 52–54; Diamond (2011), pp. 376–385.

⁷⁹ Diamond (2011), p. 377.

⁸⁰ Krosnick Report Part 1, ¶ 52; Krosnick May 8, 2019 Deposition, pp. 14:15–18:20.

“All persons residing in the State of Wisconsin who purchased Dog Food between July 1, 2014 and the present (the “Class Period”)” except “persons or entities who purchased the Dog Food for business use or resale; governmental entities; Defendants and its affiliates, subsidiaries, employees, current and former officers, director, agents, and representatives; and members of this Court and its staff.”⁸¹

49. In his deposition on May 8, 2019, Dr. Krosnick testified that he chose American adults as the relevant population based on what he claims are U.S. Federal Trade Commission’s (“FTC”) “standards and issue guidelines.”⁸² Dr. Krosnick claimed that there are specifically two populations of interest per these FTC guidelines (which he did not at all reference anywhere in his report): (i) all consumers in the country (in reference to what Dr. Krosnick claims is the reasonable consumer standard), and (ii) consumers who are “in the target market” for the product of interest.⁸³

50. Dr. Krosnick does not provide support for the idea that American adults are representative of putative class members (or even the “target market” for Champion). On the contrary, there are many reasons to expect that the two groups would differ. For example, as Dr. Krosnick’s sample demonstrates, not all American adults own a pet dog or have purchased dog food before. Not all American adults who own dogs would have purchased or would necessarily be interested in purchasing At-Issue Products, which are typically priced at a higher price bracket and are built upon a philosophy of a protein heavy diet for dogs. Thus, without having conducted any analysis or testing to compare the members of his target population (American adults) to members of the putative class, Dr. Krosnick cannot simply mention some vague FTC guidelines that he did not once cite in his report to justify his violation of the first rule of best survey practices.⁸⁴ Dr. Krosnick admitted in his May 8, 2019 deposition that he did not compare members of the putative class to American adults.⁸⁵

51. There is evidence in the record that suggests that members of the putative class may exhibit different preferences and behaviors compared to other consumers. For example,

⁸¹ Memorandum of Points and Authorities in Support of Plaintiff’s Motion for Class Certification, *Scott Weaver v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 2:18-cv-01996-JPS, August 15, 2019, pp. 8–9. According to the Complaint, the alleged Contaminated Dog Foods only include ACANA and ORIJEN dog food products. See Third Amended Complaint, ¶ 26.

⁸² Krosnick May 8, 2019 Deposition, pp. 14:19–16:3.

⁸³ Krosnick May 8, 2019 Deposition, pp. 14:19–16:3.

⁸⁴ Diamond (2011), p. 377.

⁸⁵ Krosnick May 8, 2019 Deposition, p. 36:3–12.

according to a January 2017 U.S. Dog Pet Food Survey commissioned by Champion (“U.S. Dog Pet Food Survey”), a specific subset of consumers referenced as “informed consumers” tended to consider brands like ACANA and ORIJEN.⁸⁶ These consumers represented only 18% of the overall survey sample in the U.S. Dog Pet Food Survey study.⁸⁷ According to this survey regarding informed consumers,

Not only are they more likely to be aware of specialty store-exclusive brands like Acana and Orijen, they also tend to know more about each brand. They’re also more likely to consider specialty brands like Acana and Orijen, as well.⁸⁸

52. Furthermore, the U.S. Dog Pet Food Survey study found that these consumers shopped differently than other consumers—for example, they are more likely to talk to store staff and to take staff recommendations into account when deciding which brand of dog food to purchase.⁸⁹ They are also likely to spend more money on dog food products and likely to be more concerned about certain aspects of the food like the amount of meat content.⁹⁰

53. Given the potential and significant differences between the putative class members and the American adult population, it is important for Dr. Krosnick’s Diminution in Value Survey sample to include a large enough and representative group of regular purchasers of At-Issue Products. However, Dr. Krosnick’s population contains very few respondents who *ever* purchased ACANA or ORIJEN dog food products.⁹¹ Table 2 below shows the share of these respondents in Dr. Krosnick’s Diminution in Value Survey sample.

⁸⁶ The “informed consumer” is defined in the U.S. Dog Pet Food Survey based on the response to three questions in the survey. See “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 536.

⁸⁷ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 438.

⁸⁸ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 438.

⁸⁹ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 439.

⁹⁰ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 440.

⁹¹ Dr. Krosnick’s Diminution in Value Survey included the following questions for respondents who saw ACANA Duck and Pear Singles or ORIJEN Six Fish:

- “The dog food you looked at is called [‘Acana Duck and Pear Singles’ / ‘Orijen Six Fish’]. Did you ever buy that type of dog food, or did you never buy it?”
- “Did you ever buy dog food that had the word [‘Acana’ / ‘Orijen’] written on the package, or did you never do that?”
- “Did you ever buy dog food that had the word [‘Acana’ / ‘Orijen’] written on the package after July 1, 2013, or did you never do that?”

Krosnick Report Part 1, Appendix B, pp. 202–203, 255–257. Based on these questions, it is not possible for Dr. Krosnick to identify regular purchasers of ACANA and/or ORIJEN products.

Table 2
Summary of Dr. Krosnick's Diminution in Value Survey Sample⁹²

Survey Respondents	Number of Respondents	Percent of Survey Sample
All	6,728	100%
Who Ever Purchased Any Dog Food	5,522	82%
Who Purchased Any Dog Food After July 1, 2013	3,930	58%
Who Ever Purchased Any ACANA or ORIJEN Dog Food	405	6%
Who Purchased Any ACANA or ORIJEN Dog Food After July 1, 2013	276	4%
Who Ever Purchased ACANA or ORIJEN Dog Food Seen in Krosnick's Survey	206	3%
Who Purchased ACANA or ORIJEN Dog Food Seen in Krosnick's Survey After July 1, 2013	144	2%
Who Ever Purchased Any ACANA or ORIJEN Dog Food and Was a Resident of Wisconsin	11	0%

Source: Krosnick Backup Materials

54. Table 2 shows that only 58% of Dr. Krosnick's Diminution in Value Survey sample purchased dog food after July 1, 2013.⁹³ The vast majority of respondents in Dr. Krosnick's Diminution in Value Survey sample have never purchased ACANA or ORIJEN dog food products—only 6% of Dr. Krosnick's sample claimed to have ever purchased ACANA or ORIJEN dog food products. An even larger share of respondents have not ever purchased ACANA or ORIJEN during the putative class period—only 4% of Dr. Krosnick's

⁹² Respondents were considered to have ever purchased ACANA or ORIJEN dog food if they indicated that they have ever purchased the product they were shown in the survey (based on variable SPEC_BUY in Krosnick's survey data) or if they indicated that they had purchased a dog food product with "Acana" or "Orijen" on the package (based on variables ACANA_BUY and ORIJEN_BUY in Krosnick's survey data). I understand that Plaintiffs are now seeking to certify a class that covers the period from July 1, 2014 to the present. In his Diminution in Value Survey, Dr. Krosnick asked respondents if they had purchased dog food after July 1, 2013. Results for these questions thus represent an upper bound on the number of respondents who purchased dog food during the proposed putative class period. See Krosnick Report Part 1, Appendix B, pp. 202–203; Memorandum of Points and Authorities in Support of Plaintiff's Motion for Class Certification, *Scott Weaver v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 2:18-cv-01996-JPS, August 15, 2019, pp. 8–9.

⁹³ See footnote 92 above.

Diminution in Value Survey sample claimed to have purchased ACANA or ORIJEN dog food products after July 1, 2013.⁹⁴ Finally, the last row of Table 2 shows that less than 1% of Dr. Krosnick's Diminution in Value Survey sample reported that they have purchased ACANA or ORIJEN products and that they live in the state of Wisconsin, *i.e.*, less than one percent of the sample could possibly be considered part of the putative class.

55. A further indication of Dr. Krosnick's failure to survey the relevant population is the simple fact that the majority of respondents in his sample *did not report* that they would purchase the ACANA Duck and Pear Singles or the ORIJEN Six Fish they saw, even in the absence of any Alleged Corrective Statements.

56. Table 3 below shows the share of respondents in Dr. Krosnick's Diminution in Value Survey sample who reported that they would purchase the ACANA Duck and Pear Singles or ORIJEN Six Fish in the survey.

Table 3
Share of Respondents in Dr. Krosnick's Diminution in Value Survey Sample Who Would Purchase ACANA Duck and Pear Singles or ORIJEN Six Fish

Survey Respondents	Number of Respondents Who Would Purchase	Number of Respondents	Percent of Respondents Who Would Purchase
All	673	5,808	12%
Who Saw Zero Alleged Corrective Statements	4	20	20%

Source: Krosnick Backup Materials

According to Table 3, 12% of the 5,808 respondents who were asked whether they would purchase the dog food they saw said that they would. Of these, 20 respondents saw the products without any corrective statements and only a total of 4 respondents indicated that they would purchase ACANA Duck and Pear Singles or ORIJEN Six Fish. If Dr. Krosnick were surveying regular ACANA and ORIJEN dog food purchasers, and providing them with just the real world packaging of these products and prices that presumably resemble what someone would normally pay for these products, one would expect that a higher proportion would indicate that they would buy the product they saw. Given that only a fraction of Dr. Krosnick's Diminution in Value Survey sample indicated that they would buy these products when they were just provided with packaging and pricing information suggests that the preferences of the individuals in Dr. Krosnick's Diminution in Value Survey sample

⁹⁴ See footnote 92 above.

significantly diverge from the preferences of putative class members. Thus, Dr. Krosnick's selection of a population that significantly differs from the population of interest fatally compromises the validity of his Diminution in Value Survey.⁹⁵ As Diamond (2011) aptly explains, "a survey that provides information about a wholly irrelevant population is itself irrelevant."⁹⁶

4. The Results of Dr. Krosnick's Diminution in Value Survey Analysis Cannot Be Generalized Across Different At-Issue Products

57. Dr. Krosnick's Diminution in Value Survey only includes packages from two products—ORIEN Six Fish and ACANA Duck and Pear Singles—out of the over seventy Champion dog food packages sold in the market.⁹⁷ In determining which products to use in his Diminution in Value Survey, Dr. Krosnick claims he analyzed the bags of sixty-eight of the seventy-two Champion products sold to determine "what percentage of the packages contained each element" ("each element" being certain wording, content, or imagery on the product packaging).⁹⁸ However, many of these elements are overly broad or trivial. For example, Dr. Krosnick states that 100% of bags contain a "[s]tatement about vista / outdoors / landscape."⁹⁹ He also states that 100% of bags contain the "[t]otal weight of food in package" and "[c]ustomer care information."¹⁰⁰ None of these elements, or their appearance on multiple product bags, supports the idea that ORIEN Six Fish or ACANA Duck and Pear Singles are comparable to all Champion products.

⁹⁵ Dr. Krosnick testified that his population of interest was the "all consumers in the country" as well as the subpopulations of consumers "who have been the target/potential market for the good." Krosnick May 8, 2019 Deposition, pp. 15:4–16:3. Dr. Krosnick did not provide any information on the percent of his sample that meets the subpopulation he described as "the target/potential market for the good." Table 2 and Table 3 above show that only a very small fraction of Dr. Krosnick's sample has ever purchased or would consider purchasing ACANA or ORIEN products.

⁹⁶ Diamond (2011), p. 377. It is worth noting that conducting any meaningful sensitivity analysis using a subset of Dr. Krosnick's sample that more closely resembles putative class members is not possible for two main reasons. First, regardless of survey sample size and respondent characteristics, the degree of bias due to the design flaws in Krosnick's Diminution in Value Survey would make any sensitivity analysis stemming from the survey data entirely unreliable. Second, if one were to look at a subset of Dr. Krosnick's Diminution in Value Survey sample that more closely resembles putative class members (*e.g.*, respondents who claimed to have purchased ACANA and/or ORIEN dog food products), there would only be one respondent in the control group (*i.e.*, one respondent who saw zero Alleged Corrective Statements) and no respondents who saw all eight Alleged Corrective Statements (see Table 1). It is simply not feasible to conduct a proper statistical analysis with one respondent in the control group.

⁹⁷ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 3–4.

⁹⁸ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 5–6.

⁹⁹ Krosnick Report Part 1, Technical Report Survey Methods and Results, p. 38.

¹⁰⁰ Krosnick Report Part 1, Technical Report Survey Methods and Results, pp. 38–39.

58. In addition, Dr. Krosnick's analysis compares packaging of all products to each other rather than comparing packaging of ORIJEN Six Fish and ACANA Duck and Pear Singles to packaging of all other products. This means that his "element analysis" does not say anything about the comparability of his chosen products to the full set of At-Issue Products. Therefore, Dr. Krosnick's analysis does not offer support for "generalizing the findings of [his] experiment across packages," as he claims.¹⁰¹

59. According to the information I have reviewed, the assertion that the label claims were consistent across the At-Issue Products is factually incorrect; and in fact, there is evidence in the record that not all putative class members would have been uniformly and consistently exposed to the challenged statements on product packaging.¹⁰² Indeed, the named Plaintiff in this matter and the named Plaintiffs in similar cases in other courts demonstrate substantial variation in terms of (i) which labels on the At-Issue Products impacted their purchasing decisions and (ii) their interpretation of these labels.¹⁰³

60. For example, Mr. Weaver testified that, to him, "fresh sourced product" implied there were no heavy metals, even naturally occurring ones, in the Defendant's dog food.¹⁰⁴ Ms. Lisa Slawsby (a named plaintiff in another matter and a purchaser of Champion dog food) did not remember reading the phrase "fit for human consumption" on the label of the At-Issue Products.¹⁰⁵ Ms. Carol Shoaff (a named plaintiff in another matter and a purchaser of Champion dog food) could not remember whether "minimally processed" appeared on the label of the At-issue Products, whereas Ms. Jennifer Reitman (a named plaintiff in another matter and a purchaser of Champion dog food) reported this label claim as being particularly

¹⁰¹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 6.

¹⁰² For example, the claim that the products were marketed as being made with ingredients fit for human consumption were not made on any of the ORIJEN At-Issue Products (with the exception of ORIJEN Tundra) manufactured in the NorthStar kitchen (*e.g.*, in 2015). Declaration of Chinedu Ogbonna, *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-494, December 7, 2018 ("Ogbonna Declaration"), ¶ 41. The claim was added to ORIJEN At-Issue Products made at the DogStar kitchen starting in mid-2016, and then gradually removed beginning in January 2018. Ogbonna Declaration, ¶¶ 42–43.

¹⁰³ This is not surprising. According to the results of the U.S. Dog Pet Food Survey, 41 percent of the 1,001 respondents do not rely on the information on packaging. "Brand Finance U.S. Dog Pet Food Survey," *Brand Finance*, January 13, 2017, CPF0145434–5538, at 459. Furthermore, the study found that demographic groups who are most likely to purchase Champion products, respondents making above \$60,000 per year and respondents who shop at specialty stores, are even less likely to rely on information on packaging. "Brand Finance U.S. Dog Pet Food Survey," *Brand Finance*, January 13, 2017, CPF0145434–5538, at 459.

¹⁰⁴ Deposition of Scott Weaver, June 19, 2019 ("Weaver Deposition"), pp. 87:25–88:20.

¹⁰⁵ Deposition of Lisa Slawsby, January 25, 2019 ("Slawsby Deposition"), pp. 143:19–144:8; Second Amended Class Action Complaint, *Lisa Slawsby v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court, District of Massachusetts, Case No. 1:18-cv-10701-GAO, July 10, 2018.

important to her purchasing decision.¹⁰⁶ Ms. Reitman and Ms. Shoaff both reported interpreting “Biologically Appropriate” as implying something along the lines of “healthy,” but not according to any formal definition.¹⁰⁷ On the other hand, Ms. Slawsby researched the term “Biologically Appropriate” and found a website from an Australian company (biologicallyappropriate.com), which provided certain criteria for “Biologically Appropriate.” She interpreted the label on the At-Issue Products as meaning the dog food met these criteria.¹⁰⁸ Ms. Kellie Loeb (a named plaintiff in another matter and a purchaser of Champion dog food) testified that she “didn’t really look at the contents” of the ORIJEN dog food when she first purchased the Senior and Original diets for her dogs.¹⁰⁹ She also admitted that she did not recall seeing the statement “that’s why ORIJEN features fresh, raw, or dehydrated ingredients from minimally processed poultry, fish, and eggs that are deemed fit for human consumption prior to inclusion in our foods” or “Orijen is the fullest expression of our biologically appropriate and fresh regional ingredients commitment.”¹¹⁰

61. Furthermore, very few respondents in Dr. Krosnick’s Diminution in Value Survey claimed to have *ever* purchased either ORIJEN Six Fish or ACANA Duck and Pear Singles. Of his 6,728 Diminution in Value Survey respondents, 405 respondents reported having ever purchased a dog food product with either “ORIJEN” or “ACANA” written on the package.¹¹¹

¹⁰⁶ Deposition of Jennifer Reitman, January 4, 2019 (“Reitman Deposition”), p. 112:12–25; Deposition of Carol Shoaff, January 3, 2019 (“Shoaff Deposition”), p. 148:18–23; Third Amended Class Action Complaint, *Jennifer Reitman, Carol Shoaff, and Erin Grant et al v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Central District of California Western Division, Case No. 2:18-cv-01736-DOC-JPR, May 25, 2019. See also Deposition of Kellie Loeb, September 25, 2018, (“Loeb Deposition”), pp. 84:20–86:5, 95:22–96:4. Note that Ms. Kellie Loeb is also a named plaintiff in a similar matter and a purchaser of Champion dog food. *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-494, March 28, 2018. This case was dismissed by the Court. See Order on Defendants Motion to Dismiss, *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-CV-494-JPS, June 7, 2018; Order on Summary Judgment, *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-CV-494-JPS, February 6, 2019.

¹⁰⁷ Ms. Reitman understood “biologically appropriate” to mean “to mirror the way dogs have evolved, that the composition of it, same thing, same interpretation, that the recipe formulation, the balance between protein and vegetables and fats and carbohydrates are put together or composed in a way that is appropriate for dogs and their digestive system, their metabolic system, and so forth.” Reitman Deposition, p. 110:3–15. Ms. Shoaff said “biologically appropriate” means that it’s considered healthy for the dog, specifically, biologically appropriate, like it’s edible. It’s considered a good food. It has beneficial properties. Shoaff Deposition, pp. 138:24–139:2.

¹⁰⁸ Slawsby Deposition, pp. 10:22–13:11.

¹⁰⁹ Ms. Loeb testified that her purchases of Champion dry dog food products were limited to ORIJEN Original and ORIJEN Senior for her puppy Newfoundland and for her 12-year old Australian Shepherd, respectively. Loeb Deposition, pp. 28:21–29:7. Ms. Loeb did not purchase any ACANA dry dog food products, and testified that she did not perform any research about ACANA products. Loeb Deposition, pp. 29:23–24, 123:22–23.

¹¹⁰ Loeb Deposition, pp. 84:20–86:5, 95:22–96:4.

¹¹¹ See Table 2 above.

Of those 405, only 206 (or 3% of all respondents) indicated that they had previously purchased either of the products they saw.¹¹² At most 144 of those respondents (or 2% of all respondents) purchased either of the products during the proposed class period.¹¹³

62. Dr. Krosnick testified that he could not recall the methodology he used to select the two products he tested, but that he might have selected them randomly among a set of eight products that looked similar.¹¹⁴ Therefore, even assuming Dr. Krosnick's Diminution in Value Survey results were reliable (which they are not), extrapolating these results to all of the At-Issue Products—without proper support for why the particular Champion products Dr. Krosnick tested are representative of all At-Issue Products—is speculative at best.

5. Price Levels in Dr. Krosnick's Diminution in Value Survey Are Arbitrary and Appear to Have No or Limited Impact on Respondents' Purchase Decisions

63. In Dr. Krosnick's Diminution in Value Survey, each respondent was asked whether they would purchase the ACANA Duck and Pear Singles or ORIEN Six Fish product that they saw. Dr. Krosnick randomly assigned each respondent to a specific price level corresponding either to the MSRP for the product, or "prices about 10 percent below, about 5 percent below, about 5 percent above, and about 10 percent above" the MSRP.¹¹⁵

64. Dr. Krosnick did not provide any explanation or support for choosing these specific price levels beyond his deposition testimony that he "consulted with an expert in pet food" who told him that consumers "almost always" pay MSRP.¹¹⁶

65. Regardless, results of Dr. Krosnick's Diminution in Value Survey demonstrate that the price levels used in the Diminution in Value Survey are not material to the respondents' purchase decisions. In other words, respondents were *not* more likely to say they would purchase the product when the price was lower.¹¹⁷ This goes against basic tenets of

¹¹² See Table 2 above.

¹¹³ See Table 2 above. In his Diminution in Value Survey, Dr. Krosnick asked respondents if they had purchased dog food after July 1, 2013. As such, the number presented here for respondents who purchased ACANA or ORIEN dog food during the putative class period represents an upper bound

¹¹⁴ Krosnick May 8, 2019 Deposition, pp. 122:24–123:2.

¹¹⁵ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 14 and footnote 5 citing CPF2117043–7045 for the MSRPs.

¹¹⁶ Krosnick May 8, 2019 Deposition, pp. 80:11–81:23. Dr. Krosnick could not remember the name or affiliation of this expert he consulted. Krosnick May 8, 2019 Deposition, pp. 80:11–83:14.

¹¹⁷ See Table 4 below.

economics and consumer behavior, and implies that the Diminution in Value Survey data underlying Dr. Krosnick's estimates are not reliable.

66. As I discussed above, Dr. Krosnick's methodology appears to be a form of contingent valuation.¹¹⁸ One of the most basic recommended tests for examining the quality of contingent valuation data is to check that the randomly assigned price is negatively related to the respondent's choice. For example, Dr. Richard T. Carson ("Dr. Carson"), an expert on contingent valuation with whom Dr. Krosnick has co-authored academic research several times in the past,¹¹⁹ discusses this test as follows:

The simplest test corresponds to a well-known economic maxim: the higher the cost, the lower the demand. In the binary discrete choice format, this can be easily tested by observing whether the percentage favoring the project falls as the randomly assigned cost of the project increases. This price sensitivity test has rarely failed in empirical applications.¹²⁰

67. Table 4 below shows the percent of the respondents who indicated that they would purchase the dog food they saw at each of the price levels in Dr. Krosnick's Diminution in Value Survey. This table indicates that respondents were no more likely to buy the ACANA Duck and Pear Singles or ORIJEN Six Fish at the lower price levels than at the higher price levels. For example, of those respondents who were assigned to see the labels of the ORIJEN Six Fish, 11.7% of respondents who were provided with the price of \$47.99 (the lowest price level assigned to the ORIJEN Six Fish diet in Dr. Krosnick's Diminution in Value Survey) indicated that they would purchase the product. Similarly, 11.7% of the respondents who were provided with the price of \$58.99 (the highest price level assigned to ORIJEN Six Fish diet in Dr. Krosnick's Diminution in Value Survey) indicated that they would purchase the product. Thus, the data generated by Dr. Krosnick's Diminution in Value Survey fails the simplest data validity test advanced in the academic literature.

¹¹⁸ See Section V.B.2 above.

¹¹⁹ Krosnick, J. A., et al. (2002), "The Impact of 'No Opinion' Response Options on Data Quality: Non-Attitude Reduction or an Invitation to Satisfice?" *Public Opinion Quarterly*, 66, 3, 371–403.

¹²⁰ Carson, R. T. (2000), "Contingent Valuation: A Users Guide," *Environmental Science & Technology*, 34, 8, 1413–1418 at p. 1415. Similarly, in an article titled, "An Introduction to Contingent Valuation Using Stata," the authors state that, "[a]n important aspect to check when using contingent valuation data is that individuals should be sensible to the bid amount, that is to say, we expect that as the bid amount goes up the proportion of individuals that give a positive answer goes down." See Lopez-Feldman, A. (2012), "Introduction to Contingent Valuation Using Stata," *Munich Personal RePEc Archive*, MPRA Paper No. 41018, 1–16. It is worth noting that Stata is the software used by Dr. Krosnick to analyze his own survey data.

Table 4
Share of Respondents in Dr. Krosnick's Diminution in Value Survey Sample Who Would Purchase
ACANA Duck and Pear Singles or ORIJEN Six Fish by Price

MSRP in Krosnick's Survey	Number of Respondents Who Would Purchase	Number of Respondents	Percent of Respondents Who Would Purchase	Average Number of Alleged Corrective Statements Seen
ACANA Duck and Pear Singles				
\$37.99	83	573	14.5%	4.0
\$39.99	70	589	11.9%	4.0
\$41.99	73	588	12.4%	4.0
\$43.99	68	570	11.9%	4.0
\$45.99	61	588	10.4%	3.9
All ACANA	355	2,908	12.2%	4.0
ORIJEN Six Fish				
\$47.99	72	614	11.7%	4.0
\$50.99	45	555	8.1%	3.9
\$53.49	69	594	11.6%	4.1
\$55.99	66	575	11.5%	4.0
\$58.99	66	562	11.7%	4.0
All ORIJEN	318	2,900	11.0%	4.0

Source: Krosnick Backup Materials; Krosnick Report Part 1, Technical Report Survey Methods and Results

68. As a second step in analyzing the relationship between price and whether respondents indicated that they would purchase the product at the specific price level they were provided with (and again as recommended in an introductory guide on contingent valuation), I performed a basic regression analysis.¹²¹ Again, one would expect to see that as prices increase, fewer respondents would report that they would purchase the dog food they were shown.¹²²

69. In the real world, one would expect price to be a strong predictor of whether an individual purchases a product. Therefore, one would expect that Dr. Krosnick's price variable would have a statistically significant and negative relationship with the purchasing decision—*i.e.*, one would expect that respondents would be less likely to purchase a particular product when the associated price is higher.

70. Table 5 below shows the results of my analysis, where I re-estimated Dr. Krosnick's ordinary least squares regression model with the addition of an explanatory variable for the price respondents saw. The first column of estimates is from the Krosnick Report Part 1 and the second column of estimates is from a model with the same specification as Dr. Krosnick's

¹²¹ Lopez-Feldman, A. (2012), "Introduction to Contingent Valuation Using Stata," *Munich Personal RePEc Archive*, MPRA Paper No. 41018, 1–16.

¹²² It should be noted that Dr. Krosnick did not include the price that respondents saw as an explanatory variable in his ordinary least squares regressions where the outcome is a binary variable for whether the respondent reported that they would purchase the dog food they saw. Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 32.

but with an additional variable for the price that the respondents were provided with. The estimated coefficient on price is -0.001 with a p-value of 0.606 (and therefore not statistically significant). This result suggests that there is no relationship between the price respondents saw and whether respondents reported that they would or would not purchase the ACANA Duck and Pear Singles or the ORIEN Six Fish diet they saw in the Diminution in Value Survey.

71. This finding is inconsistent with the academic literature which show that price changes typically result in significant changes in demand for the product. For example, the sensitivity of consumer demand for a brand to a change in price, or elasticity, is over 20 times higher in magnitude than advertising elasticities (*i.e.*, the sensitivity of consumer demand for a product to changes in the advertising level).¹²³

72. As an additional test of Dr. Krosnick's Diminution in Value Survey data reliability, I examined whether respondents with higher incomes were more likely to report that they would be willing to pay for the product they see—this is another data quality test recommended in the literature on contingent valuation.¹²⁴ In the context of Dr. Krosnick's Diminution in Value Survey, this test is based on the expectation that the higher the income of the respondents, the higher their willingness to pay would be for the dog food products they were shown in the Diminution in Value Survey. To analyze this, as recommended in academic research using contingent valuation methods, I tested whether the income of a respondent predicts whether a respondent reported that they would purchase the dog food.¹²⁵ I used the same model specification as Dr. Krosnick, but included the income of respondents as a control variable.

73. Table 5 below shows the results of my analysis. The third column of estimates is from a model with the same specification as Dr. Krosnick's but with an additional variable for the income of the respondent. The estimated coefficient on income is -0.006 with a p-value of 0.431 (and therefore not statistically significant). This result suggests that there is no relationship between the respondent's income and whether the respondent reported that they

¹²³ Hanssens, D. M., ed. (2015), *Empirical Generalizations about Marketing Impact*, Cambridge, MA: Marketing Science Institute; Hanssens, D. M. and K. H. Pauwels (2016), "Demonstrating the Value of Marketing," *Journal of Marketing: AMA/MSI Special Issue*, 80, 173–190 at Table 3 and p. 180.

¹²⁴ Cawley, J. (2008), "Contingent Valuation Analysis of Willingness to Pay to Reduce Childhood Obesity," *Economics & Human Biology*, 6, 2, 281–292 at p. 287; Arrow, K., et al. (1993), "Report of the NOAA Panel on Contingent Valuation," *Federal Register*, 58, 10, 4601–4614 at p. 4613.

¹²⁵ Cawley, J. (2008), "Contingent Valuation Analysis of Willingness to Pay to Reduce Childhood Obesity," *Economics & Human Biology*, 6, 2, 281–292 at p. 287.

would or would not purchase the ACANA Duck and Pear Singles or the ORIJEN Six Fish product they saw in the Diminution in Value Survey. Again, this indicates that Dr. Krosnick's Diminution in Value Survey data are unreliable.

Table 5
Sensitivities Analysis on Dr. Krosnick's Diminution in Value Survey
Ordinary Least Squares Regression with the Inclusion of Price and Income Variables¹²⁶

Variable	Dr. Krosnick's Specification	Dr. Krosnick's Specification Plus Price Control	Dr. Krosnick's Specification Plus Income Control
Number of Alleged Corrective Statements			
Coefficient	-0.017	-0.017	-0.017
p-value	0.000	0.000	0.001
Price			
Coefficient		-0.001	
p-value		0.606	
Income			
Coefficient			-0.006
p-value			0.431
R-squared	0.083	0.083	0.080

Source: Krosnick Backup Materials

74. In conclusion, the simple fact that respondents ignored the prices they saw in the Diminution in Value Survey when indicating their purchase intention suggests that Dr. Krosnick's analysis cannot be used to reliably calculate even an average willingness-to-pay measure for At-Issue Products with and without the Alleged Corrective Statements, and certainly cannot measure a change in market price for the At-Issue Products that can be linked to Plaintiff's theory of damages.

C. Dr. Krosnick's Alleged Corrective Statements Are Vague, Lacking Context, and Leading, Rendering the Diminution in Value Survey Responses Susceptible to a Host of Cognitive Biases

75. In addition to the fatal issues I have discussed so far, there are two fundamental problems with the design of the Alleged Corrective Statements that Dr. Krosnick uses in his Diminution in Value Survey: (1) the contents and wording of these Alleged Corrective Statements are vague, lacking the proper context, and likely to generate cognitive biases, and

¹²⁶ I performed the sensitivity analysis using price as a control variable by including the variable "price" (results hold when including the variable "price_cond" instead of the variable "price"); note that the results also hold without the variable for the "Number of Alleged Corrective Statements" and without any of Dr. Krosnick's controls. I performed the sensitivity analysis using income as a control variable by including the discrete variable for income brackets that can take the values of 1, 2, 3 or 4 and is generated using the variables "inc_1," "inc_2," and "inc_3" (results hold without including the control variables used by Dr. Krosnick's and when using separate dummy variables for each income bracket).

(2) the manner in which Dr. Krosnick's Alleged Corrective Statements are presented to respondents is likely to generate multiple cognitive biases for the Diminution in Value Survey respondents, resulting in unreliable responses.

1. Dr. Krosnick's Alleged Corrective Statements Contain Vague Language, Do Not Provide Proper Context, and Are Leading

a) Dr. Krosnick's Alleged Corrective Statements Contain Vague Language

76. As indicated by the academic literature, vague wording that is open to interpretation in survey questionnaires may result in unreliable responses.¹²⁷ Dr. Krosnick himself writes that, when designing surveys, it is best practice to “select words that have only one meaning,” noting that respondents can easily misinterpret what is being asked of them.¹²⁸

77. Dr. Krosnick's Alleged Corrective Statements are vague because they do not provide information about the alleged *level* of heavy metals or BPA in the dog food that respondents see and also do not give any indication of the *likelihood* that heavy metals or BPA is present.¹²⁹ Dr. Krosnick's Alleged Corrective Statements state that the dog food “may contain” heavy metals or BPA.¹³⁰

78. Absent information about the level of heavy metals and BPA and the likelihood that they are present at all, the respondent is left to assume the missing information and answer questions accordingly. There is no reason to believe that all or most respondents made assumptions that are consistent with the actual likelihood of the presence of heavy metals and BPA in the dog food and the actual or the alleged level of heavy metals and BPA contained in dog food, if it was present at all. This is critical, because the specific level of heavy metals and BPA contained in the dog food (whether alleged or actual) could impact a consumer's perception of the quality and healthiness of the dog food and the likelihood a consumer would want to purchase it. For example, trace or undetectable amounts of heavy metals and BPA may have little or no impact on a consumer's perception of the quality or healthiness of the product, and a high likelihood of the presence of heavy metals and BPA could elicit a

¹²⁷ Diamond (2011), p. 388; Orme, B. K. (2014), *Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research*, Manhattan Beach, CA: Research Publishers, p. 54.

¹²⁸ Krosnick, J. A., D. L. Vannette, eds. (2018), “Questionnaire Design” in *The Palgrave Handbook of Survey Research*, Cham, Switzerland: Springer Nature, 439–455 at p. 452.

¹²⁹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, pp. 198–199.

¹³⁰ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10 and Appendix B, pp. 198–199.

different response than a very low likelihood of the presence of heavy metals and BPA.¹³¹ Dr. Krosnick's Diminution in Value Survey leaves it up to the individual respondent to determine a level and likelihood of heavy metals and BPA in the dog food they saw and to make an assessment of the quality and healthiness of the product and purchase choice based on this determination. Given this setting, it is not possible to know exactly what each respondent is reacting to.

b) Dr. Krosnick's Alleged Corrective Statements Do Not Provide Proper Context

79. Dr. Krosnick's Alleged Corrective Statements do not provide context that would help respondents interpret the statements, such as the levels at which the heavy metals and BPA are indeed harmful, the levels that occur naturally in the environment, and the levels present in other pet food products and At-Issue Products; the amount of fresh ingredients in other pet food products and At-Issue Products; or information about sourcing of ingredients and outsourcing to third parties by other pet food manufacturers and Champion.

80. For example, the following information is posted on Champion's website:

Heavy metals are naturally occurring in the environment and as a result are present in many pet and human foods. In our foods with higher meat content, these naturally occurring metals are still well within acceptable regulatory limits. We are 100% confident that Champion's foods are safe.¹³²

BPA is ubiquitous in the environment. No BPA chemicals are added to Champion foods or packaging materials. All Champion packaging is in full compliance with the CFIA in Canada, FDA in the USA and applicable packaging food additive regulations. The trace levels of BPA alleged by the Plaintiffs would not cause harm to pets.¹³³

None of this information and context is provided in Dr. Krosnick's relevant Alleged Corrective Statements.

81. I understand that Champion's expert in a related matter, Dr. Robert H. Poppenga ("Dr. Poppenga"), reviewed and evaluated "the testing methodology and results associated

¹³¹ For example, a given respondent could interpret the phrase "may contain" as a fifty percent chance that heavy metals and BPA would be present in the dog food while another could interpret it as less than a one percent chance.

¹³² "Frequently Asked Questions," *Champion Petfoods*, <https://www.championpetfoodsfacts.com/class-action-faqs/>.

¹³³ "Frequently Asked Questions," *Champion Petfoods*, <https://www.championpetfoodsfacts.com/class-action-faqs/>.

with an analysis of Champion's ACANA and ORIJEN pet foods included in Champion's May 2017 White Paper on Heavy Metals and Pet Food as well as Champion's heavy metals testing conducted in the regular course of business," and "the testing methodology and results associated with Plaintiff's BPA levels" as alleged in the Complaint.¹³⁴ I understand that Dr. Poppenga also reviewed "scientific, peer-reviewed literature related to metals in pet foods and the occurrence of adverse health effects in humans and animals from BPA and metals of concern (arsenic, cadmium, lead and mercury)" and "regulations and standards for the ingestion of BPA and heavy metals."¹³⁵ Based on his findings, Dr. Poppenga concluded that "[h]eavy metals occur in nature and the environment and are often found in pet food at safe levels;" and that "the levels of naturally occurring heavy metals in ACANA and ORIJEN dog food diets do not present a health risk to dogs."¹³⁶ Plaintiff's expert witness in a related matter, Dr. Sean P. Callan, who provided analytical testing results previously reported on certain Champion products, similarly testified that heavy metals are present in almost all dry dog food products.¹³⁷ Dr. Poppenga also concluded that "BPA is a commonly used, high volume substance that is ubiquitous in the environment and in human and pet foods," and that "the levels of BPA as alleged by Plaintiffs and as reflected in Plaintiffs' test reports in ACANA and ORIJEN dog food diets do not present a health risk to dogs."¹³⁸ Conveying this type of information and context in the Alleged Corrective Statements may have produced different results.

82. Furthermore, the content of the remaining three Alleged Corrective Statements—"the food... may include ingredients that are delivered to them fresh but have been frozen before they are used to make the dog food," "the food ... may include ingredients that are sourced outside the region where it is manufactured," and "the manufacturer ... uses third parties to process and manufacture protein meals and tallows used in dog foods"¹³⁹—are vague and again lack proper context. To the extent that other manufacturers of dog food products use frozen ingredients or ingredients that are sourced outside the region of manufacture, and outsource the processing of some ingredients, these statements are not specific to Champion

¹³⁴ Expert Report of Dr. Robert H. Poppenga, DVM, Ph.D., DABVT, *Jennifer Reitman and Carol Shoaff v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Central District of California, Western Division, Case No. 2:18-cv-01736-DOC-JPR, April 8, 2019 ("Poppenga Report"), p. 2.

¹³⁵ Poppenga Report, p. 2.

¹³⁶ Poppenga Report, p. 21.

¹³⁷ Deposition of Dr. Sean P. Callan, May 9, 2019 ("Callan Deposition"), pp. 54:16–55:3.

¹³⁸ Poppenga Report, pp. 21–22.

¹³⁹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10.

and apply to other pet food manufacturers and their products. These Alleged Corrective Statements therefore cause bias because they present this information only for Champion products and not for any other brand of pet food products.

83. The content of the Alleged Corrective Statements was provided to Dr. Krosnick by Plaintiff's counsel.¹⁴⁰ Because neither Plaintiff nor Dr. Krosnick provided the backup to quotes from government agencies or other organizations that were used in the Alleged Corrective Statements, I conducted searches to identify the source material for these quotes. Even though the sources I identified that contain the quotes may not be the ones that the Plaintiff or Dr. Krosnick relied upon, the types of information I identified in these sources are informative in demonstrating the cherry-picked and out of context nature of Dr. Krosnick's Alleged Corrective Statements.

84. Specifically, I identified important information from the various agencies referenced in Dr. Krosnick's Alleged Corrective Statements regarding acceptable levels of each substance and important caveats. For example, the article from the World Health Organization ("WHO") that I identified which contains the quote used by Dr. Krosnick in his Alleged Corrective Statement about mercury includes the following statements:

Mercury exists in various forms: elemental (or metallic) and inorganic (to which people may be exposed through their occupation); and organic (e.g., methylmercury, to which people may be exposed through their diet). These forms of mercury differ in their degree of toxicity and in their effects on the nervous, digestive and immune systems, and on lungs, kidneys, skin and eyes.

All humans are exposed to some level of mercury. Most people are exposed to low levels of mercury, often through chronic exposure (continuous or intermittent long term contact).

Factors that determine whether health effects occur and their severity include: the type of mercury concerned; the dose; the age or developmental stage of the person exposed (the fetus is most susceptible); the duration of exposure; the route of exposure (inhalation, ingestion or dermal contact).¹⁴¹

¹⁴⁰ According to Dr. Krosnick, each of the Alleged Corrective Statements is "a statement provided by Plaintiff's attorneys to correct alleged misinformation on the Champion packaging." See Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10.

¹⁴¹ "Mercury and Health," *World Health Organization*, March 31, 2017, <https://www.who.int/news-room/fact-sheets/detail/mercury-and-health>.

Dr. Krosnick's Alleged Corrective Statement regarding the alleged presence of mercury in the At-Issue Products fails to include information that qualifies the levels of mercury that are dangerous and the information that all humans are exposed to some level of mercury "often through chronic exposure," like this article does.¹⁴²

85. Similarly, a publication about cadmium I identified that contains the quote in Dr. Krosnick's Alleged Corrective Statement on the alleged presence of cadmium notes that there are "not-to-exceed" levels, which are levels in air, water, soil, or food above which there may be effects for humans and animals.¹⁴³ Further, the article that contains the information in Dr. Krosnick's Alleged Corrective Statement on the alleged presence of lead notes that "[l]ead occurs in foods because of its presence in the environment."¹⁴⁴ It also explains that "the Centers for Disease Control and Prevention (CDC) recommends that doctors begin monitoring children who have a blood lead level measured as 5 micrograms per deciliter ($\mu\text{g}/\text{dL}$)."¹⁴⁵

86. Overall, Dr. Krosnick's Alleged Corrective Statements contain cherry-picked statements without any attempt at providing proper context. Without providing such context for whether the amounts of the heavy metals and BPA that may be present in the At-Issue Products would be harmful either through discrete or cumulative consumption, Dr. Krosnick is simply raising one red flag after another about the products he is showing his respondents just before he asks whether they would buy these products.

c) Dr. Krosnick's Alleged Corrective Statements Are Leading

87. An important aspect of any survey design is that the survey elements—such as questions, answers, prompts and instructions—are not leading. As Diamond (2011) explains:

¹⁴² Dr. Krosnick testified in his deposition that he had seen this paper from the World Health Organization and that he was "aware of the fact that the statement is a correct summary of what the World Health Organization says." Krosnick May 8, 2019 Deposition, p. 21:7–21. It is clear that Dr. Krosnick's Alleged Corrective Statement regarding presence of mercury does not provide a "correct summary," as he claims.

¹⁴³ "Toxicological Profile for Cadmium," *U.S. Department of Health and Human Services*, September 2012.

¹⁴⁴ "Lead in Food, Foodwares, and Dietary Supplements," *U.S. Food & Drug Administration*, February 19, 2019, <https://www.fda.gov/food/metals/lead-food-foodwares-and-dietary-supplements>.

¹⁴⁵ "Lead in Food, Foodwares, and Dietary Supplements," *U.S. Food & Drug Administration*, February 19, 2019, <https://www.fda.gov/food/metals/lead-food-foodwares-and-dietary-supplements>.

[T]he wording of a question ... can be leading or non-leading, and the degree of suggestiveness of each question must be considered in evaluating the objectivity of a survey.¹⁴⁶

Similarly, the *Manual for Complex Litigation* states that:

[I]n assessing the validity of a survey, the judge should take into account the following factors: whether the questions asked were ... not leading.¹⁴⁷

88. In the case of Dr. Krosnick's Diminution in Value Survey, the contents of his Alleged Corrective Statements are framed in ways that can result in cognitive biases. Dr. Krosnick's Alleged Corrective Statements, which are provided to respondents just prior to the question about their product purchase intent, emphasize (repeatedly, depending on the number of statements a given respondent is assigned to see) negative product characteristics.

89. For example, Dr. Krosnick informs Diminution in Value Survey respondents that laboratory testing has shown that there is a risk the food they just saw contains something that is "toxic," "poisonous," something that can result in "nerve or brain damage," or something that is described as "an industrial chemical."¹⁴⁸ This design is likely to bias respondents towards focusing on these negative characteristics more than they would in a real-world purchasing environment. Research shows, in fact, that negative traits often make a stronger impact on people than positive traits.¹⁴⁹ Negative information is also more influential in forming opinions, and negative opinions are quicker to form and are harder to change than positive ones.¹⁵⁰ This is a well-established cognitive bias known as "negativity bias" in the academic literature.¹⁵¹ Dr. Krosnick's emphasis on these negative characteristics creates a negativity bias.

¹⁴⁶ Diamond (2011), p. 393.

¹⁴⁷ Marcus, S., et al., eds. (2004), *Manual for Complex Litigation*, Washington, D.C.: Federal Judicial Center, p. 103.

¹⁴⁸ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 10, Appendix B, pp. 198–199.

¹⁴⁹ Baumeister, R. F., et al. (2001), "Bad Is Stronger Than Good," *Review of General Psychology*, 5, 4, 323–370.

¹⁵⁰ See, e.g., Anderson, N. H. (1965), "Averaging Versus Adding as a Stimulus-Combination Rule in Impression Formation," *Journal of Experimental Psychology*, 70, 4, 394–400; Skowronski, J. J. and D. E. Carlston (1989), "Negativity and Extremity Biases in Impression Formation: A Review of Explanations," *Psychological Bulletin*, 105, 1, 131–142; Baumeister, R. F., et al. (2001), "Bad Is Stronger Than Good," *Review of General Psychology*, 5, 4, 323–370, at p. 323 ("Taken together, these findings suggest that bad is stronger than good, as a general principle across a broad range of psychological phenomena.") Other research streams have also supported the idea of greater weighting of negative information, e.g., the Prospect Theory notion that "losses loom larger than gains." See Kahneman, D. and A. Tversky (1979), "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica*, 47, 2, 263–292.

¹⁵¹ Baumeister, R. F., et al. "Bad Is Stronger Than Good," *Review of General Psychology*, 5, 4, 323–370.

90. The issues that arise from vague and unclear language, lack of context, and leading questions are particularly problematic in circumstances where respondents are unfamiliar with the products they are being asked about. For example, academic research has found that:

It is particularly important that subjects have familiarity with the products and features they are being asked to evaluate.... [I]n cases where preferences are not well formed in advance, subjects will be particularly vulnerable to manipulation, and training that embodies manipulation that is not realistic risks inducing stated responses that are not predictive for real market behavior.¹⁵²

As described above in Section V.B.3, the vast majority of Dr. Krosnick's respondents were not familiar with, or at least had never bought, ACANA or ORIJEN dog food. Thus the vague and leading corrective statements could easily result in responses that are not consistent with actual market behavior.

91. Finally, it should be noted that Dr. Krosnick testified that the veracity of the information in his Alleged Corrective Statements has no bearing on the validity of his estimates.¹⁵³ This suggests that Dr. Krosnick's results are not sensitive to the ability of his Alleged Corrective Statements to in fact correct or remedy the alleged misrepresentations and omissions. In other words, the accuracy of the information given to the respondents does not matter; the alleged decline in "value" Dr. Krosnick finds happens regardless of the content of the provided information. If the Alleged Corrective Statements do not accurately describe the likelihood of presence of heavy metals and BPA and the levels (if any) contained in relevant Champion products, then they are disconnected from the allegations in this matter. This is yet another example of the unreliability of Dr. Krosnick's results.

2. Dr. Krosnick's Presentation of the Alleged Corrective Statements Is Leading and Susceptible to Demand Artifacts

92. In addition to issues relating to the language of Dr. Krosnick's Alleged Corrective Statements as described above, the manner in which Dr. Krosnick presents his Alleged Corrective Statements is likely to lead respondents to overweight the claims made in these

¹⁵² Ben-Akiva, M., D. et al. (2018), "Foundations of Stated Preference Elicitation: Consumer Behavior and Choice-Based Conjoint Analysis," *Foundations and Trends in Econometrics*, 10, 2, 1–124, at pp. 25–27.

¹⁵³ Krosnick May 8, 2019 Deposition, p. 22:14–16.

statements and to unduly influence respondents' purchase choices regarding the dog food they saw.

93. Dr. Krosnick's presentation of the Alleged Corrective Statements, in isolation and right before they answer questions about the products they saw, differs substantially from his presentation of other information and likely causes respondents to place heightened focus on these statements. It is well documented in the academic literature that the manner in which content is shown to respondents can lead to "focusing illusion bias" or "focalism," which occurs when respondents' attention is drawn to a particular piece of information.¹⁵⁴ Focalism is widely known to result in biased survey responses.¹⁵⁵

94. Rather than including the Alleged Corrective Statements in a setting where a consumer would normally receive product information (*e.g.*, on the package), the Alleged Corrective Statements are emphasized by being shown in isolation and separately from the product packaging information in Dr. Krosnick's Diminution in Value Survey. Specifically, after spending time reviewing information on product packaging, but before seeing the Alleged Corrective Statements, Dr. Krosnick's Diminution in Value Survey respondents were provided with the following instruction:

**NEXT, YOU WILL READ SOME INFORMATION ABOUT THE DOG
FOOD THAT IS NOT ON THE PACKAGE.**¹⁵⁶

These instructions differ significantly from the instructions shown to respondents before reviewing statements from the Champion packaging, which reads as follows (and are not in boldface font and are not printed in all upper case):

On the next few screens, you will see the words that are printed on the front of the bag you just saw. Please read the words on each screen and then go on to the next screen.¹⁵⁷

Respondents then see the Alleged Corrective Statement they are assigned to, and only after that are they posed the questions about whether they would purchase the product and

¹⁵⁴ Schkade, D. A. and D. Kahneman (1998), "Does Living in California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction," *Psychological Science*, 9, 5, 340–346; Kahneman, D., et al. (2006), "Would You Be Happier If You Were Richer? A Focusing Illusion," *Science*, 312, 5782, 1908–1910.

¹⁵⁵ Huber, J. (1997), "What We Have Learned from 20 Years of Conjoint Research: When to Use Self-Explicated, Graded Pairs, Full Profiles or Choice Experiments," *Sawtooth Software Research Paper Series*, 1–15 at p. 2.

¹⁵⁶ Krosnick Report Part 1, Appendix B, p. 249. Emphasis in original.

¹⁵⁷ Krosnick Report Part 1, Appendix B, p. 225.

questions regarding the healthiness and quality of the product they saw. This heightened emphasis on the Alleged Corrective Statements due to how the information is presented in isolation is what makes results generated by Dr. Krosnick's Diminution in Value Survey susceptible to focalism bias.

95. Furthermore, Dr. Krosnick displayed each Alleged Corrective Statement as the sole piece of content on the page. This is again in contrast to how respondents viewed the other statements that were present on Champion product packaging. The pages that respondents saw with text from Champion packaging contained numerous distinct statements and up to 296 words, far more than the longest Alleged Corrective Statement, which contained only a maximum of 60 words.¹⁵⁸

96. The manner in which the Alleged Corrective Statements are presented and the negative and leading nature of the language used in these statements makes it difficult for Dr. Krosnick to disguise the purpose of his survey from his respondents and renders Dr. Krosnick's survey susceptible to demand artifacts—a well-established finding in academic literature that describes the phenomenon where survey respondents provide what they perceive to be the “correct” answers for the investigator, rather than answers that represent their true opinions.¹⁵⁹ Demand artifacts have been shown in the academic literature to generate biased results.¹⁶⁰

97. Additionally, the way Dr. Krosnick's Diminution in Value Survey presents the Alleged Corrective Statements is so divorced from the real world that they cannot be used to estimate or predict actual purchasing behavior or consumer preferences. An important tenet of designing surveys measuring purchase preference is mimicking, as much as possible, the real market experience.¹⁶¹ As Simonson and Kivetz (2012) explain,

¹⁵⁸ Krosnick Report Part 1, Appendix B.

¹⁵⁹ “[T]he survey instrument should provide no explicit or implicit clues about the sponsorship of the survey or the expected responses.” Diamond (2011), p. 411.

¹⁶⁰ See Simonson, I. and R. Kivetz (2012), “Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions,” in *Trademark and Deceptive Advertising Surveys*, S. Diamond and J. Swann, eds., Chicago, IL: ABA Publishing, 243–259 at pp. 243–244. (“Demand effects (also referred to as demand artifacts) are produced when respondents use cues provided by the survey procedures and questions to figure out the purpose of the survey and to identify the ‘correct’ answers to the questions they are asked. The respondents may then provide what they perceive as the correct or expected answers, to make sure that the results ‘come out right.’... [S]evere demand effects can be particularly problematic when the survey design and related questions (a) suggest the correct answer and/or (b) cause respondents to make comparisons or consider relations or other aspects”).

¹⁶¹ Rao, V. R. (2014), *Applied Conjoint Analysis*, New York, NY: Springer, p. 45.

[A] stimuli presentation that looks “normal” and might be expected given the characteristics of the marketplace and the products at issue is less likely to generate unrepresentative conjectures, unusual interpretations, suspicions, or other responses relating to an artificial survey context.¹⁶²

98. The presentation of Dr. Krosnick’s Alleged Corrective Statements does not simulate a real world decision-making process. Displaying the packaging of a single brand and diet of dog food and asking respondents whether or not they would purchase the food, without providing information about other competing products that are available and their features and prices does not replicate the real-world purchase decision-making process. As Dr. Krosnick acknowledges, there are more than seventy packages of At-Issue Products.¹⁶³

* * *

99. Collectively, the various survey instrument design issues that I identified in Dr. Krosnick’s Diminution in Value Survey are likely to lead respondents to say that they would not purchase the dog food product they saw. These issues render the results of the Diminution in Value Survey biased and unreliable.

**D. Dr. Krosnick Did Not Pre-Test His Diminution in Value Survey
Instrument or Use Standard Measures to Ensure Data Integrity**

100. Dr. Krosnick did not pre-test his Diminution in Value Survey, despite the fact that he advocates for pre-tests in his academic writings, stating that “[n]o matter how closely a questionnaire follows recommendations based on best practices, it is likely to benefit from pretesting: a formal evaluation carried out before the main survey.”¹⁶⁴ He has also conducted

¹⁶² Simonson, I. and R. Kivetz (2012), “Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions,” in *Trademark and Deceptive Advertising Surveys*, S. Diamond and J. Swann, eds., Chicago, IL: ABA Publishing, 243–259 at p. 250. See also Edwards, G. K. (2012), “The Daubert Revolution and Lanham Act Surveys,” in *Trademark and Deceptive Advertising Surveys*, S. Diamond and J. Swann, eds., Chicago, IL: ABA Publishing, 329–362 at pp. 346–348.

¹⁶³ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 3–4.

¹⁶⁴ Krosnick May 8, 2019 Deposition, pp. 51:11–21; 83:15–18; Krosnick, J. A., and S. Presser (2010), “Question and Questionnaire Design,” in *Handbook of Survey Research*, J.D. Wright and P.V. Marsden, eds., West Yorkshire, England: Emerald Group Publishing Limited, p. 52. The lack of a pre-test of the survey questionnaire demonstrates another example of Dr. Krosnick’s failure to follow well-established survey best practices. See Diamond (2011), pp. 388–389. Dr. Krosnick’s inability to identify potential confusion among his respondents, due to his lack of a pre-test, applies not only to the Alleged Corrective Statements but also to many of the other questions in his survey. For example, Dr. Krosnick’s Diminution in Value Survey informed respondents whether the product they saw was “Acana Duck and Pear Singles” or “Orijen Six Fish” and then asked respondents “Did you ever buy that type of dog food, or did you never buy it?” See Krosnick Report Part 1, Appendix B, p. 255. It seems very likely that many respondents interpreted the word “type” in the question to mean dog food with fish or duck and not specifically ORIJEN or ACANA. This question is particularly important as it identifies Champion purchasers and putative class members within Dr. Krosnick’s sample. It is

pre-tests for surveys he has conducted for other litigation matters.¹⁶⁵ It is not clear why he did not pre-test his Diminution in Value Survey. Because Dr. Krosnick did not conduct a pre-test—by asking probing questions to a small group of respondents about whether they understood or had any difficulty with the instructions, questions, and answer choices in the survey—he has no ability to evaluate potential difficulties that respondents might have experienced when responding to questions.¹⁶⁶ Nor does he know whether respondents interpreted instructions, questions, and answer choices in a consistent manner or in the way Dr. Krosnick intended his respondents to interpret them.

101. Additionally, Dr. Krosnick's Diminution in Value Survey is extremely lengthy and imposes substantial cognitive demands on respondents by asking them to review numerous images and slides of text in addition to answering pages of questions. There is a large body of literature, to which Dr. Krosnick has contributed, focused on the tendency of survey participants to use shortcuts and provide less accurate responses when surveys are demanding or lengthy.¹⁶⁷ As Dr. Krosnick himself noted, survey "[r]espondents are likely to satisfy whatever desires motivate them to participate just a short way into" a survey and then begin "to compromise their standards and expend less energy."¹⁶⁸ Dr. Krosnick has written extensively on how respondents shift response strategies and engage in satisficing.¹⁶⁹ When respondents engage in satisficing, they do not provide high-quality responses and are more susceptible to cognitive biases, all of which leads to unreliable results.¹⁷⁰

not possible to reliably determine the number of purchasers of Champion products or putative class members among Dr. Krosnick's survey respondents due to imprecision in the wording of this question.

¹⁶⁵ See, e.g., Report of Dr. Jon A. Krosnick, *Martin Schneider, Sarah Deigert, Laurie Reese, Theresa Gamage, Tiffanie Zangwill, and Nadia Parikka v. Chipotle Mexican Grill, Inc., a Delaware Corporation*, United States District Court Northern District of California, Case No. 16-cv-02200, August 11, 2017, ¶¶ 25, 47, 58.

¹⁶⁶ Diamond (2011), pp. 388–389; Krosnick, J. A., and S. Presser (2010), "Question and Questionnaire Design," in *Handbook of Survey Research*, J.D. Wright and P.V. Marsden, eds., West Yorkshire, England: Emerald Group Publishing Limited, 263–313, at p. 294.

¹⁶⁷ Krosnick, J. A. (1991), "Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys," *Applied Cognitive Psychology*, 5, 3, 213–236 at pp. 214–215.

¹⁶⁸ Krosnick, J. A. (1991), "Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys," *Applied Cognitive Psychology*, 5, 3, 213–236 at pp. 214–215.

¹⁶⁹ Krosnick, J. A. (1991), "Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys," *Applied Cognitive Psychology*, 5, 3, 213–236 at pp. 214–215; Krosnick, J. A. and S. Presser (2010), "Question and Questionnaire Design," in *Handbook of Survey Research*, J. D. Wright and P. V. Marsden eds., West Yorkshire, England: Emerald Group Publishing Limited, 263–313 at pp. 265–266; Krosnick, J. A. (1999), "Survey Research," *Annual Review of Psychology*, 50, 537–567 at pp. 547–549.

¹⁷⁰ Krosnick, J. A. (1991), "Response Strategies for Coping with the Cognitive Demands of Attitude Measures in Surveys," *Applied Cognitive Psychology*, 5, 3, 213–236 at pp. 214–220; Krosnick, J. A. and S. Presser (2010), "Question and Questionnaire Design," in *Handbook of Survey Research*, J. D. Wright and P. V. Marsden eds., West Yorkshire, England: Emerald Group Publishing Limited, 263–313 at pp. 265–266.

102. Respondents in Dr. Krosnick's Diminution in Value Survey were asked to review 10 images of Champion packaging and 10 pages of text, including over 125 phrases and over 1,900 words – all before even beginning to answer any questions about Champion products.¹⁷¹ Academic literature, including Dr. Krosnick's own research, has found that respondents engage in satisficing after just the first set of questions.¹⁷² Dr. Krosnick also notes that respondents are likely to satisfice when they become "fatigued, disinterested, or distracted," all of which are like to occur given the design, length, and content of Dr. Krosnick's survey.¹⁷³

103. Furthermore, despite the considerable length and complexity of his Diminution in Value Survey, Dr. Krosnick did not include any attention check questions. An attention check question "measures whether or not participants are reading the instructions, [and] ... consists of a question embedded within the experimental materials that is similar to the other questions in length and response format [but] ... asks participants to ignore the standard response format and instead provide a confirmation that they have read the instruction."¹⁷⁴ Any respondent who did not follow this instruction would be excluded from subsequent analysis because their responses would be unreliable. This is a basic survey quality control mechanism and one that is especially important with online samples such as Dr. Krosnick's.¹⁷⁵

104. Dr. Krosnick also allowed respondents to complete his Diminution in Value Survey using mobile devices (rather than requiring they only use computers or laptops to be able to

¹⁷¹ Krosnick Report Part 1, Appendix B.

¹⁷² Krosnick, J. A. and S. Presser (2010), "Question and Questionnaire Design," in *Handbook of Survey Research*, J. D. Wright and P. V. Marsden eds., West Yorkshire, England: Emerald Group Publishing Limited, 263–313 at pp. 265–266.

¹⁷³ Krosnick, J. A. and S. Presser (2010), "Question and Questionnaire Design," in *Handbook of Survey Research*, J. D. Wright and P. V. Marsden eds., West Yorkshire, England: Emerald Group Publishing Limited, 263–313 at pp. 265–266. Indeed, Dr. Krosnick's Diminution in Value Survey respondents took 22.1 minutes to complete the survey on average, with a median completion time of 15.9 minutes. Further, 25 percent of Dr. Krosnick's sample finished the survey in under 11.3 minutes and 10 percent finished in under 7.8 minutes. These fast survey completion times suggest that at least some of Dr. Krosnick's respondents may have been engaged in "satisficing." Even though each respondent was not asked all of the questions in the questionnaire, these survey response times are still remarkably fast.

¹⁷⁴ Oppenheimer, D. M. et al. (2009), "Instructional Manipulation Checks: Detecting Satisficing to Increase Statistical Power," *Journal of Experimental Social Psychology*, 45, 4, 867–872 at p. 867. An example of an attention check question is: "People vary in the amount they pay attention these kinds of surveys. Some take them seriously and read each question whereas others go very quickly and barely read the questions at all. If you have read this question carefully, please type the word 'yes' in the Other (please specify) box below."

¹⁷⁵ Berinsky, A. J., et al. (2014), "Separating The Shirkers From The Workers? Making Sure Respondents Pay Attention on Self-Administered Surveys," *American Journal of Political Science*, 58, 3, 739–753.

participate in the survey)).¹⁷⁶ As Dr. Krosnick's Diminution in Value Survey requires that respondents review images and large amounts of text, these tasks are likely made more difficult by a smaller screen. Surprisingly, Dr. Krosnick testified that he was not even aware of how many respondents took the Diminution in Value Survey on a mobile device, when, in fact, 53 percent of his respondents completed the Diminution in Value Survey using a mobile device.¹⁷⁷

105. According to Struminskaya et al. (2015):

Using a mobile device for survey completion can be a difficult task due to technical reasons such as a small screen, a touchscreen, as well as situational characteristics if respondents are outside of home.¹⁷⁸

Further, the authors find that respondents using mobile devices are more likely than PC or laptop users to be distracted, to provide inaccurate answers, and to skip questions.¹⁷⁹ Finally, respondents using mobile devices are more likely to exhibit satisficing behavior.¹⁸⁰

106. Oddly, some respondents were able to take Dr. Krosnick's Diminution in Value Survey not once but twice.¹⁸¹ This calls into question the quality assurance practices of Dr. Krosnick's consumer panel data vendor. When Dr. Krosnick finds out about this problem, instead of excluding all of these respondents from his data, he inappropriately leaves them in his Diminution in Value Survey sample and uses the "data from the person's first time completing of [sic] the questionnaire" in his analysis.¹⁸²

107.

108. All of this demonstrates that Dr. Krosnick did not use proper measures to ensure integrity of survey data and strongly suggests that his Diminution in Value Survey results are not reliable.

¹⁷⁶ Krosnick May 8, 2019 Deposition, p. 37:13–14.

¹⁷⁷ Krosnick May 8, 2019 Deposition, p. 40:23–25; Backup materials produced with this report.

¹⁷⁸ Struminskaya, B., K. Weyandt, and M. Bosnjak (2015), "The Effects of Questionnaire Completion Using Mobile Devices on Data Quality. Evidence from a Probability-Based General Population Panel," *Methods, Data, Analyses*, 9, 2, 261–292 at p. 263.

¹⁷⁹ Struminskaya, B., K. Weyandt, and M. Bosnjak (2015), "The Effects of Questionnaire Completion Using Mobile Devices on Data Quality. Evidence from a Probability-Based General Population Panel," *Methods, Data, Analyses*, 9, 2, 261–292 at pp. 262–263.

¹⁸⁰ Struminskaya, B., K. Weyandt, and M. Bosnjak (2015), "The Effects of Questionnaire Completion Using Mobile Devices on Data Quality. Evidence from a Probability-Based General Population Panel," *Methods, Data, Analyses*, 9, 2, 261–292 at pp. 263–264.

¹⁸¹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 23.

¹⁸² Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 23.

E. Dr. Krosnick Did Not Use Appropriate Methods to Analyze the Diminution in Value Survey Data

109. As discussed in section V.B.2, Dr. Krosnick uses his so-called “Lewbel-Watanabe” approach to estimate a form of average willingness-to-pay.¹⁸³ Dr. Krosnick’s choice of method for his analysis is not standard. After an extensive search, I only found the “Lewbel-Watanabe” approach used in two studies. One study is published in the journal *Marine Policy* and estimates average willingness-to-pay for preserving coastal infrastructure.¹⁸⁴ Dr. Krosnick was actually a co-author for the other study, which was for litigation around the 2010 Deepwater Horizon oil spill.¹⁸⁵ The fact that these two articles both relate to damage to the environment again points to the fact that this method, and contingent valuation methodology in general, is almost always used to estimate willingness-to-pay for a *non-market* good (or a good that is not traded and that does not have a market price). In fact, Dr. Carson, an authority on contingent valuation and a co-author of Dr. Krosnick,¹⁸⁶ has written a user’s guide on contingent valuation in which the opening sentence of the abstract defines contingent valuation as:

[A] survey-based method frequently used for placing monetary values on environmental goods and services not bought and sold in the marketplace.¹⁸⁷

As such, contingent valuation is not a standard method for estimating damages from Plaintiff’s allegations as the At-Issue Products are market goods.

110. Furthermore, Dr. Krosnick’s analyses are subject to several statistical issues.¹⁸⁸ One of the models used by Dr. Krosnick is an ordinary least squares regression with the purchase decision as the outcome variable.¹⁸⁹ The purchase decision in Dr. Krosnick’s model is a

¹⁸³ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 34.

¹⁸⁴ Banerjee, O., et al. (2018), “Estimating Benefits of Investing in Resilience of Coastal Infrastructure in Small Island Developing States: An Application to Barbados,” *Marine Policy*, 90, 78–87.

¹⁸⁵ Bishop, R. C., et al. (2017), “Putting a Value on Injuries to Natural Assets: The BP Oil Spill,” *Science*, 356, 6335, 253–254.

¹⁸⁶ Krosnick, J. A., et al. (2002), “The Impact of ‘No Opinion’ Response Options on Data Quality: Non-Attitude Reduction or an Invitation to Satisfice?” *Public Opinion Quarterly*, 66, 3, 371–403.

¹⁸⁷ Carson, R. T. (2000), “Contingent Valuation: A Users Guide,” *Environmental Science & Technology*, 34, 8, 1413–1418.

¹⁸⁸ The impact of these issues is relatively small as compared to the impact of the biases and design flaws I explain above, which render Dr. Krosnick’s Diminution in Value Survey data unusable. However, these fundamental statistical errors call into question the integrity and validity of Dr. Krosnick’s methodologies and analyses.

¹⁸⁹ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 32.

binary variable—*i.e.*, it takes on the value of “0” if a respondent indicated that they would not purchase the dog food they saw and a value of “1” if a respondent indicated that they would purchase the dog food they saw. Any introductory econometrics course includes a section on binary dependent variables and the fact that ordinary least squares regression may not be well-suited when the dependent variable is a binary variable.¹⁹⁰ A common solution is to use a logit or probit model.¹⁹¹ Dr. Krosnick ignores this basic econometric principle.

111. Another model used by Dr. Krosnick relies on an index he creates by first converting responses to two questions into numerical values on a 100-point scale and then averaging across the two values to make a single “index” value, which he then uses as his dependent variable.¹⁹² Dr. Krosnick’s creation of this index is arbitrary and incorrect in that the variables are ordinal variables and it is not valid to simply average two different ordinal variables to create a new variable.¹⁹³ There are several correct ways of modelling these variables, one of which is to run separate regressions for each variable using an ordered logit or ordered probit model.¹⁹⁴

112. Lastly, Dr. Krosnick’s controls are arbitrary. In particular, Dr. Krosnick uses two index variables that he made by combining eleven different questions from his survey.¹⁹⁵ Dr. Krosnick stated that variables were selected because they “manifested statistically significant relations with the purchasing decision in theoretically expected directions.”¹⁹⁶ Furthermore, he claims that these eleven variables were then divided into two index variables based on a principal component factor analysis.¹⁹⁷ The statistical software code that were provided to me by Dr. Krosnick and his team did not contain any of these analyses.¹⁹⁸ As such, Dr. Krosnick’s principal component factor analysis is unsupported and cannot be replicated.

¹⁹⁰ Stock, J. H. and M. W. Watson (2007), *Introduction to Econometrics*, Boston, MA: Addison-Wesley, at p. 391.

¹⁹¹ Stock, J. H. and M. W. Watson (2007), *Introduction to Econometrics*, Boston, MA: Addison-Wesley, at p. 391.

¹⁹² Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 38–40.

¹⁹³ Jamieson, S. (2004), “Likert Scales: How to (Ab)use Them,” *Medical Education*, 38, 12, 1217–1218. An ordinal variable is one where the ordering of the values conveys information but the magnitude of the values does not. An interval variable is similar to an ordinal variable, with the exception that the difference between values is meaningful and consistent across intervals. See Woolridge, J. M. (2009), *Introductory Econometrics: A Modern Approach*, Mason, OH: South-Western Cengage Learning, pp. 235–238, 843.

¹⁹⁴ Stock, J. H. and M. W. Watson (2007), *Introduction to Econometrics*, Boston, MA: Addison Wesley, at p. 423.

¹⁹⁵ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 27–31.

¹⁹⁶ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 27.

¹⁹⁷ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶¶ 27–31.

¹⁹⁸ See Krosnick Backup Materials.

VI. Dr. Krosnick's Pentobarbital Survey Is Irrelevant to Plaintiff's Damages Claims and Suffers from Multiple Flaws and Errors That Render Its Results Unreliable

A. Dr. Krosnick's Pentobarbital Survey

113. Dr. Krosnick states that he designed his Pentobarbital Survey to evaluate how “learning about the risk of the possible presence of a non-natural substance (pentobarbital) impact[s] consumers’ perceptions of the quality and healthiness of the dog foods.”¹⁹⁹ The overall design of Dr. Krosnick’s Pentobarbital Survey is similar to his Diminution in Value Survey except two important differences. First, unlike Dr. Krosnick’s Diminution in Value Survey, his Pentobarbital Survey does not include any questions about whether or not the respondent would be willing to purchase the dog food, and there is no price information given to respondents. Second, unlike Dr. Krosnick’s Diminution in Value Survey, Dr. Krosnick’s Pentobarbital Survey contains a proper control group.

114. In his Pentobarbital Survey, Dr. Krosnick first showed each respondent images and text from all sides of the packaging of either ORIJEN Regional Red, ACANA Appalachian Ranch, or ACANA Heritage Red Meat.²⁰⁰ He then randomly assigned each respondent to either read one of two messages about the alleged presence of pentobarbital in the dog food product they saw or to receive no additional information.²⁰¹

115. Specifically, the respondents who were assigned to see the Alleged Pentobarbital Corrective Statements were asked to read one of the following statements:

The dog food you saw may contain a drug called pentobarbital. According to the U.S. government, pentobarbital is used to calm animals, to put them to sleep, to reduce their feelings of pain, and to end their lives.²⁰²

According to the U.S. government, the dog food you saw was made with meat products provided by a company that did not make sure to keep out meat from animals whose lives had been ended by giving them a drug called pentobarbital.²⁰³

¹⁹⁹ Krosnick Report Part 2, ¶ 47.

²⁰⁰ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶¶ 73–74.

²⁰¹ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 75. In other words, one third of Dr. Krosnick’s respondents only saw packaging of the product they were shown (*i.e.*, the control group), and two thirds saw the product packaging and read one of the two Alleged Pentobarbital Corrective Statements.

²⁰² Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 75.

²⁰³ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 75.

The content of the Alleged Pentobarbital Corrective Statements was provided to Dr. Krosnick by Plaintiff's counsel.²⁰⁴

116. Dr. Krosnick then asked each respondent to rate how they perceived the quality and healthiness of the dog food product they saw on a five-point scale.²⁰⁵ Subsequently, Dr. Krosnick asked questions regarding respondents' previous dog ownership and dog food purchases (including whether or not respondents had purchased ACANA or ORIJEN dog food).²⁰⁶ He then asked questions "tapping respondents' experiences owning dogs"²⁰⁷ as well as two questions about whether respondents had purchased organic or non-GMO foods in the past month.²⁰⁸ Dr. Krosnick used responses to these questions to create two indices, a "Concern for dog" index, and a "Purchase of non-GMO / Organic" index, that were intended to measure respondents' "inclination toward devoting effort to promoting the health of their dogs and toward promoting their own health."²⁰⁹

117. Dr. Krosnick converted respondents' responses to the questions on quality and healthiness to a numerical scale, and averaged these responses to create an index of respondents' perceptions of the quality and healthiness of the dog food they saw.²¹⁰ He then used ordinary least squares regression and included his "Concern for dog" index, his "Purchase of non-GMO / organic" index, and demographic variables as control variables in his regression.²¹¹

118. Dr. Krosnick concluded based on the results of his survey that "reading either corrective statement reduced [respondents'] evaluations of the quality and healthiness of the dog food as compared to people who read no corrective statement."²¹²

²⁰⁴ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 75.

²⁰⁵ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 76. For quality, the scale included excellent, good, fair, poor, and very poor. For healthiness, the scale included extremely healthy, very healthy, moderately healthy, slightly healthy, and not healthy at all. See Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 91.

²⁰⁶ Krosnick Report Part 2, Appendix B, pp. 541–544.

²⁰⁷ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 85 and Appendix B, pp. 544–547. Respondents who indicated that they had never owned a dog were not asked these questions.

²⁰⁸ Krosnick Report Part 2, Appendix B, p. 548.

²⁰⁹ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶¶ 85–89.

²¹⁰ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶¶ 92–93.

²¹¹ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 93.

²¹² Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 94.

B. Dr. Krosnick's Pentobarbital Survey is Irrelevant to Estimating Damages

119. Dr. Krosnick's Pentobarbital Survey does not include any questions about whether or not the respondent would be willing to purchase the dog food they saw at a specified price, and in doing so departs from Dr. Krosnick's Diminution in Value Survey.²¹³ Dr. Krosnick has no way of knowing whether respondents in his Pentobarbital Survey would purchase the product they saw (in the absence of Alleged Pentobarbital Corrective Statements) or whether the Alleged Pentobarbital Corrective Statements would have any impact on the respondents' likelihood of purchasing that product.²¹⁴ Relatedly, Dr. Krosnick testified in his deposition that his Pentobarbital Survey does not provide any measure of respondents' willingness to pay.²¹⁵

120. Dr. Krosnick's stated conclusion from the results of his Pentobarbital Survey is simply about the impact of the Alleged Pentobarbital Corrective Statements on *perceptions of quality and healthiness* of the relevant products.²¹⁶ His survey therefore does not provide any input for estimating alleged diminution of value in relation to Plaintiff's pentobarbital claims; and he, correctly, does not draw any conclusions regarding the diminution of value in ORIJEN Regional Red, ACANA Appalachian Ranch, or ACANA Heritage Red Meat (or any other Champion product) caused by the possible presence of pentobarbital.

121. In sum, without having made any attempt at measuring diminution in value (if any) due to the alleged inclusion, or risk of inclusion, of pentobarbital in ORIJEN Regional Red, ACANA Appalachian Ranch, or ACANA Heritage Red Meat, the results of Dr. Krosnick's Pentobarbital Survey are irrelevant to damages estimation for any of these (or any other Champion) products. Indeed, Plaintiff's damages expert, Mr. Weir, does not specifically reference Dr. Krosnick's Pentobarbital Survey in his report and his estimate of Illegal Sales Damages is unrelated to the Pentobarbital Survey.²¹⁷ Even if Dr. Krosnick's Pentobarbital Survey was designed correctly—which it is not, as I discuss below—the results are irrelevant to the estimation of damages.

²¹³ Krosnick Report Part 1, Technical Report Survey Methods and Results, ¶ 11.

²¹⁴ Dr. Krosnick suggests in his August 27, 2019 deposition that there may be “less interest” in purchasing the product. However, he provides no analysis to support this and admits he has performed no quantification of purchasing interest. Deposition of Dr. Jon A. Krosnick, August 27, 2019 (“Krosnick August 27, 2019 Deposition”), p. 21:4–16.

²¹⁵ Krosnick August 27, 2019 Deposition, pp. 8:24–9:6, 21:22–24.

²¹⁶ Krosnick Report Part 2, ¶ 80.

²¹⁷ Mr. Weir's estimate of damages related to Plaintiff's pentobarbital claim does not rely on Dr. Krosnick's Pentobarbital Survey at all. See Weir Report, Section VII.

C. Dr. Krosnick's Own Survey Data Demonstrate Wide Variation in Consumer Responses to the Alleged Pentobarbital Corrective Statements

122. Absent purchasing questions, Dr. Krosnick's Pentobarbital Survey focuses on the impact of corrective statements on perceptions of quality and healthiness. His main results appear in a set of two tables on page 380 of Krosnick Report Part 2. Dr. Krosnick claims that the results in these tables "show how the two corrective statements reduced ratings of the quality and healthiness of the products."²¹⁸ However, Dr. Krosnick's results indicate that the perceptions of many respondents were not greatly impacted by the Alleged Pentobarbital Corrective Statements. This is true despite many flawed survey design choices Dr. Krosnick made, which I describe further below, that introduce potential biases and are likely to lower respondents' perceptions of quality and healthiness of the products they were shown in the survey.

123. In particular, Dr. Krosnick's tables show that the *majority* of respondents who saw an Alleged Pentobarbital Corrective Statement still thought the dog food was of "Excellent" quality or "Good" quality.²¹⁹ Furthermore, over 45 percent of respondents who saw an Alleged Pentobarbital Corrective Statement thought the dog food was "Extremely Healthy" or "Very Healthy."²²⁰ This means that even after seeing an Alleged Pentobarbital Corrective Statement, approximately half of these respondents assessed the healthiness or quality of the dog food they saw as the highest or second highest possible rating. These results are inconsistent with a presumption of uniform negative impact of such statements on purchase decisions. Even for respondents in Dr. Krosnick's sample who did not give the product one of the top two ratings, the survey results provide no information on purchasing behavior. For example, respondents who rated the product they saw as "Fair" quality and "Slightly Healthy" after seeing an Alleged Pentobarbital Corrective Statement could still have indicated that they would purchase the product if asked.

124. Dr. Krosnick's tables also demonstrate a wide variation in consumer responses to the Alleged Pentobarbital Corrective Statements, with the results of the Krosnick Pentobarbital Survey suggesting that different members of the putative class may react differently when exposed to the same information regarding pentobarbital.

²¹⁸ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶ 95.

²¹⁹ Krosnick Report Part 2, Technical Report Survey Methods and Results, p. 380.

²²⁰ Krosnick Report Part 2, Technical Report Survey Methods and Results, p. 380.

D. Dr. Krosnick's Pentobarbital Survey Suffers from Multiple Flaws and Errors That Render Its Results Unreliable

125. Like Dr. Krosnick's Diminution in Value Survey, his Pentobarbital Survey suffers from several serious design flaws. Dr. Krosnick fails to sample from the relevant population, uses vague and alarming language in his Alleged Pentobarbital Corrective Statements, presents his Alleged Pentobarbital Corrective Statements in a manner that is leading and prone to bias, fails to conduct a pre-test or employ data quality control measures such as attention check questions, and uses non-standard statistical analyses.²²¹

1. Dr. Krosnick Did Not Survey the Relevant Population

126. As discussed in regards to Dr. Krosnick's Diminution in Value Survey,²²² one of the fundamental requirements in proper survey design is the identification of an appropriate universe or population; and, just as in the Diminution in Value Survey, Dr. Krosnick's Pentobarbital Survey fails this "crucial" requirement.²²³ The population targeted by Dr. Krosnick, American adults age 18 and over, is inconsistent with the class definition proposed by Plaintiff, and Dr. Krosnick provides no analysis to demonstrate that his survey respondents and the putative class—"[a]ll persons residing in the State of Wisconsin who purchased JBS Dog Food between January 2016 and December 2018")" except "persons or entities who purchased the Dog Food for business use or resale; governmental entities; Defendants and its affiliates, subsidiaries, employees, current and former officers, director,

²²¹ Dr. Krosnick did not provide the data required to determine whether additional failings present in his Diminution in Value Survey were also present in his Pentobarbital Survey such as indicators of whether a respondent took the Pentobarbital Survey on a mobile device and whether respondents started the Pentobarbital Survey multiple times. He also removed the demographic questions from his Pentobarbital Survey entirely, which makes it impossible to compare his demographic responses to the demographic information provided from the Pentobarbital Survey panel provider.

²²² See Section V.B.3.

²²³ "The definition of the relevant population is crucial because there may be systematic differences in the responses of members of the population and nonmembers. For example, consumers who are prospective purchasers may know more about the product category than consumers who are not considering making a purchase." Diamond (2011), p. 377.

agents, and representatives; and members of this Court and its staff.”²²⁴—have similar perceptions or preferences in dog food products.²²⁵

127. Given the potential and significant differences between the putative class members and the American adult population (discussed in Section V.B.3), it is important for Dr. Krosnick’s sample to be representative of purchasers of At-Issue Products. However, Dr. Krosnick’s sample in the Pentobarbital Survey (similar to his other survey) contains very few respondents who *ever* purchased ACANA or ORIJEN dog food products.²²⁶

128. Table 6 below provides a summary of the composition of Dr. Krosnick’s sample. It shows that almost a fifth of the sample reported that they have *never purchased dog food*.²²⁷ Only three percent of Dr. Krosnick’s sample reported that they have ever purchased Champion dog food, and there is only a single respondent in the entire sample who resides in Wisconsin and has ever purchased Champion dog food.

²²⁴ Memorandum of Points and Authorities in Support of Plaintiff’s Motion for Class Certification, *Scott Weaver v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 2:18-cv-01996-JPS, August 15, 2019, pp. 8–9.

²²⁵ Krosnick Report Part 2, ¶ 52; Krosnick May 8, 2019 Deposition, pp. 14:15–18:20 and p. 36:3–12.

²²⁶ Dr. Krosnick’s Pentobarbital Survey included the following:

- “The dog food you looked at is called [‘Orijen Regional Red’ / ‘Acana Regionals Appalachian Ranch’ / ‘Acana Heritage Red Meat’]. Did you ever buy that type of dog food, or did you never buy it?”
- “Did you ever buy dog food that had the word [‘Orijen’ / ‘Acana’] written on the package, or did you never do that?”
- “Did you ever buy dog food that had the word [‘Orijen’ / ‘Acana’] written on the package after July 1, 2013, or did you never do that?”

Krosnick Report Part 2, Appendix B, pp. 541–542. Based on these questions, it is not possible for Dr. Krosnick to identify regular purchasers of ACANA and/or ORIJEN products.

²²⁷ In Dr. Krosnick’s sample, 19 percent of respondents had never bought dog food before, and 15 percent had never owned a dog. Krosnick Backup Materials.

Table 6
Summary of the Composition of Dr. Krosnick's Pentobarbital Survey Sample²²⁸

Survey Respondents	Number of Respondents	Percent of Survey Sample
All	859	100%
Who Ever Purchased Any Dog Food	692	81%
Who Purchased Any Dog Food After July 1, 2013	495	58%
Who Ever Purchased Any ACANA or ORIJEN Dog Food	27	3%
Who Ever Purchased Any ACANA or ORIJEN Dog Food After July 1, 2013	17	2%
Who Purchased Any ACANA or ORIJEN Dog Food Seen in Krosnick's Survey	14	2%
Who Purchased ACANA or ORIJEN Dog Food Seen in Krosnick's Survey After July 1, 2013	11	1%
Who Ever Purchased Any ACANA or ORIJEN Dog Food and Was a Resident of Wisconsin	1	0%

Source: Krosnick Backup Materials

129. In addition to the major flaw of not limiting his sample to purchasers or likely purchasers of Champion products, Dr. Krosnick also does not justify why his sample is representative of the specific state population of interest. Only 2.7 percent of the sample in Dr. Krosnick's Pentobarbital Survey lives in Wisconsin.²²⁹ He does not conduct a separate analysis for respondents in Wisconsin, nor does he attempt to explain why respondents across the entire nation would be similar to Wisconsin class members.

²²⁸ I understand that Plaintiffs are now seeking to certify a subclass for the claims relating to pentobarbital that covers the period from January 2016 to December 2018. In his Pentobarbital Survey, Dr. Krosnick asked respondents if they had purchased dog food after July 1, 2013. Results for these questions thus represent an upper bound on the number of respondents who purchased dog food during the proposed Pentobarbital Subclass period. See Krosnick Report Part 2, Appendix B, pp. 541–542; Memorandum of Points and Authorities in Support of Plaintiff's Motion for Class Certification, *Scott Weaver v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 2:18-cv-01996-JPS, August 15, 2019, pp. 8–9.

²²⁹ 23 of the 859 respondents (2.7 percent) in the Krosnick Pentobarbital Survey reside in Wisconsin. See Krosnick Backup Materials.

2. Dr. Krosnick's Alleged Pentobarbital Corrective Statements Contain Vague and Alarming Language that Do Not Properly Correct the Alleged Misrepresentations or Omissions

130. Like Dr. Krosnick's Diminution in Value Survey, his Pentobarbital Survey includes vaguely-worded corrective statements that do not specify the level or likelihood of pentobarbital being in the dog food. Dr. Krosnick's Pentobarbital Survey simply leaves it up to the individual respondent to determine a level and likelihood of pentobarbital in the dog food they saw and to make an assessment of the quality and healthiness of the product based on this determination. Given this setting, it is not possible to know exactly what each respondent is reacting to. Dr. Krosnick admitted that he conducted no analysis to determine how respondents interpreted the Alleged Pentobarbital Corrective Statements.²³⁰ As I discussed in Section V.C.1 above, vaguely worded questions can bias survey results.

131. In addition, the language used in the two corrective statements is alarming (such as the description of animals' lives being ended) and the references to the U.S. government are leading (such as the suggestion of improper manufacturer processes as identified by the government in one of the statements). Academic research shows that people tend to focus on and overweight negative information when making judgements, therefore such clearly negative wording is likely to unduly influence respondents towards negative assessments of the product.²³¹

3. Dr. Krosnick's Presentation of the Alleged Pentobarbital Corrective Statements is Leading and Susceptible to Demand Artifacts

132. As in Dr. Krosnick's Diminution in Value Survey,²³² the manner in which Dr. Krosnick presents his Alleged Pentobarbital Corrective Statements is likely to cause

²³⁰ Krosnick August 27, 2019 Deposition, pp. 15:16–25, 26:24–27:3.

²³¹ See, e.g., Anderson, N. H. (1965), "Averaging Versus Adding as a Stimulus-Combination Rule in Impression Formation," *Journal of Experimental Psychology*, 70, 4, 394–400; Skowronski, J. J. and D. E. Carlston (1989), "Negativity and Extremity Biases in Impression Formation: A Review of Explanations," *Psychological Bulletin*, 105, 1, 131–142; Baumeister, R. F., et al. (2001), "Bad Is Stronger Than Good," *Review of General Psychology*, 5, 4, 323–370 at p. 323 ("Taken together, these findings suggest that bad is stronger than good, as a general principle across a broad range of psychological phenomena.") Other research streams have also supported the idea of greater weighting of negative information, e.g., the Prospect Theory notion that "losses loom larger than gains." See Kahneman, D. and A. Tversky (1979), "Prospect Theory: An Analysis of Decision Under Risk," *Econometrica*, 47, 2, 263–292.

²³² See Section V.C.2.

respondents to overweight these statements and to unduly influence respondents' assessments of the quality and healthiness of the dog food they saw.

133. Dr. Krosnick's presentation of the Alleged Pentobarbital Corrective Statements in isolation, after respondents' review of product packaging but right before they answer questions about the products they saw, likely causes respondents to place heightened focus on these statements, leading to focalism bias.²³³ Further, the manner in which the Alleged Pentobarbital Corrective Statements are presented and the negative and leading nature of the language used in these statements makes it difficult for Dr. Krosnick to disguise the purpose of his survey from his respondents and renders Dr. Krosnick's survey susceptible to demand artifacts.²³⁴ As discussed in detail in Section V.C.2 of this report, it is well documented in the academic literature that focalism and demand artifacts result in biased survey responses.

134. Additionally, Dr. Krosnick does not provide his respondents any information about comparable products, which is dissimilar to the context in which most consumers would evaluate a product. Frequently, consumers evaluate and form perceptions about the quality or specific attributes of a product while comparing it to other alternative products.²³⁵ These considerations are absent from Dr. Krosnick's Pentobarbital Survey which asks respondents to consider only a single Champion product in isolation.

4. Dr. Krosnick Did Not Pre-Test His Pentobarbital Survey Instrument or Use Standard Survey Tools to Ensure Data Integrity

135. Because he did not pre-test his survey, Dr. Krosnick has no ability to evaluate potential difficulties that respondents might have experienced in attempting to understand his Alleged Pentobarbital Corrective Statements. Furthermore, despite the considerable length of his Pentobarbital Survey, Dr. Krosnick did not employ any standard measures that help ensure integrity of survey data such as including attention check questions. I describe these

²³³ Schkade, D. A. and D. Kahneman (1998), "Does Living in California Make People Happy? A Focusing Illusion in Judgments of Life Satisfaction," *Psychological Science*, 9, 5, 340–346; Kahneman, D., et al. (2006), "Would You Be Happier If You Were Richer? A Focusing Illusion," *Science*, 312, 5782, 1908–1910.

²³⁴ See Simonson, I. and R. Kivetz (2012), "Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions," in *Trademark and Deceptive Advertising Surveys*, S. Diamond and J. Swann, eds., Chicago, IL: ABA Publishing, 243–259 at pp. 243–244.

²³⁵ Kotler, P. and K. L. Keller (2016), *Marketing Management*, Essex, England: Pearson Education Limited, pp. 196–198.

issues in Section V.D above in the context of the Diminution in Value Survey, and they apply equally to Dr. Krosnick's Pentobarbital Survey.

5. Dr. Krosnick Did Not Use Appropriate Methods to Analyze the Pentobarbital Survey Data

136. As in his analysis of his Diminution in Value Survey data, Dr. Krosnick used statistical methods that are fundamentally flawed and violate basic norms of statistical research.²³⁶

137. Dr. Krosnick creates the dependent variable for his Pentobarbital Survey statistical analysis by inappropriately converting two ordinal variables into numerical values on a 100-point scale and then averaging across the two values to make a single "index" value. Simply averaging two different ordinal variables to create this new variable is erroneous.²³⁷ Dr. Krosnick then improperly uses a model (ordinary least squares regression) that is meant for a continuous dependent variable to analyze his dependent variable. Furthermore, as in the Diminution in Value Survey analysis, Dr. Krosnick arbitrarily selects control variables for his regressions, and, in his Pentobarbital Survey, Dr. Krosnick does not provide any justifications for his apparently arbitrary modelling choices.²³⁸

138. It should also be noted that Dr. Krosnick states that he uses eleven questions to create his indexed control variables.²³⁹ However, in his code, he actually uses responses to only ten questions, as he does not include a question about whether a respondent chooses dog food based on whether it improves their dog's appearance.²⁴⁰ This apparent error further highlights the unreliability of Dr. Krosnick's analysis.

139. As in his analysis of his Diminution in Value Survey, Dr. Krosnick's failure to follow proper statistical procedures in his analysis demonstrates the overall non-standard and unscientific nature of his Pentobarbital Survey.

²³⁶ See the discussion in Section V.E.

²³⁷ Jamieson, S. (2004), "Likert Scales: How to (Ab)use Them," *Medical Education*, 38, 12, 1217–1218. An ordinal variable is one where the ordering of the values conveys information but the magnitude of the values does not. An interval variable is similar to an ordinal variable, with the exception that the difference between values is meaningful and consistent across intervals. See Woolridge, J. M. (2009), *Introductory Econometrics: A Modern Approach*, Mason, OH: South-Western Cengage Learning, pp. 235–238, 843.

²³⁸ As noted above in Section V.E, Dr. Krosnick claimed to use a principle component analysis when creating and selecting his control variables for his analysis of the Diminution in Value Survey, however, he did not provide any materials to replicate this analysis. In the case of his Pentobarbital Survey, Dr. Krosnick does not even claim to have a justification for his modelling decisions. Krosnick Report Part 2, Appendix B.

²³⁹ Krosnick Report Part 2, Technical Report Survey Methods and Results, ¶¶ 86–89.

²⁴⁰ Krosnick Backup Materials.

VII. Many Factors Affect Consumers' Purchase Decisions, and There Is Heterogeneity in the Purchase Decision-Making Process Across Individual Consumers and Their Dogs

140. Even if Dr. Krosnick's Diminution in Value Survey was valid—which it is not, as I explained in the sections above—the consumer purchase decision-making process for dog food products is highly individualized and is inherently different across purchasers under various dimensions of the marketing mix.²⁴¹

141. Multiple marketing factors influence each potential buyer's decision, and these factors interact with both external factors and buyer-specific characteristics in a complex decision-making process. Specifically, several factors generally known as “marketing stimuli” are understood to influence consumer decision-making, and the extent of their influence is determined by the individual characteristics of the consumer. The marketing stimuli are usually organized in four categories called the 4 Ps of Marketing—Price, Product, Place, and Promotion. Taken together, the 4 Ps constitute the so-called “marketing mix.”²⁴² In the following sub-sections, I analyze heterogeneity across purchasers of dog food products for each of the 4 Ps in turn.

A. Price

142. Price is a factor that affects the sales of every product. Basic economics and marketing tells us that, all else equal, as the price of a product goes up, lower quantities of the product will be sold, and as price goes down, more of the product will be sold.²⁴³ Consumers with lower incomes also tend to be more price-sensitive and less willing to pay higher prices. For example, the January 2017 U.S. Dog Pet Food Survey found that, relative to higher income respondents, lower income respondents were more likely to report that “better pricing” was important when purchasing dog food and that higher income respondents were more likely to shop for pet food at specialty stores.²⁴⁴ This is also confirmed by Mr. Weaver,

²⁴¹ Peter, J. P. and J. C. Olson (2010), “Affect and Cognition and Marketing Strategy,” in *Consumer Behavior and Marketing Strategy*, New York, NY: McGraw-Hill/Irwin, 36–65.

²⁴² Kotler, P. and K. L. Keller (2012), “Defining Marketing for the 21st Century,” in *Marketing Management*, Upper Saddle River, NJ: Prentice Hall, 2–31 at p. 25.

²⁴³ Kotler, P. and K. L. Keller (2012), “Developing Pricing Strategies and Programs,” in *Marketing Management*, Upper Saddle River, NJ: Prentice Hall, 382–413.

²⁴⁴ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 465, 468.

who reports that he used to purchase “regular, old dog food” as he had three children and limited income, but since his “income has changed dramatically” he now “spare[s] nothing for [his] dogs.”²⁴⁵

B. Product

143. Product is a bundle of physical characteristics and other benefits that provide value to the consumer and thus influence his or her purchase decision. The characteristics of dog food products include the type of protein (such as chicken, fish, or beef), fat content, grain content, dry or freeze-dried preparation, package size, and a multitude of additional factors.²⁴⁶ The influence of different characteristics on product purchase decisions may vary across consumers, and may vary for the same consumer over time.

144. This means that the same consumer will make different purchasing decisions at different points in time when faced with a different “marketing mix.” In fact, an article published by *Consumer Reports* interviewed veterinarians who report that they vary the type of pet food they use over time.²⁴⁷ Similarly, some purchasers of Champion products report changing their dog food brand and flavor within a given brand multiple times over the alleged class period based on their own preferences and the preferences of the dog for whom the food was purchased.²⁴⁸

145. The responses provided by Dr. Krosnick’s Diminution in Value Survey respondents are also consistent with the heterogeneity in preferences for various dog food product characteristics. For example, in his Diminution in Value Survey, Dr. Krosnick asked several questions such as “[i]f you were to buy dog food, when deciding which food to buy, how much attention would you pay to whether the food [is all-natural / is grain free / is organic / will improve the health of dogs / tastes good to dogs]?”²⁴⁹ For each question, respondents

²⁴⁵ Weaver Deposition, p. 115:12–16.

²⁴⁶ See, e.g., the various dog food products available on ACANA’s website. “Acana Heritage Red Meat Formula,” *Acana*, <https://acana.com/usa/our-foods/dog-foods/heritage/red-meat/>; “Acana Regionals Wild Atlantic,” *Acana*, <https://acana.com/usa/our-foods/dog-foods/regionals/wild-atlantic/>; “Acana Regionals Meadowland,” *Acana*, <https://acana.com/usa/our-foods/dog-foods/regionals/meadowland/>.

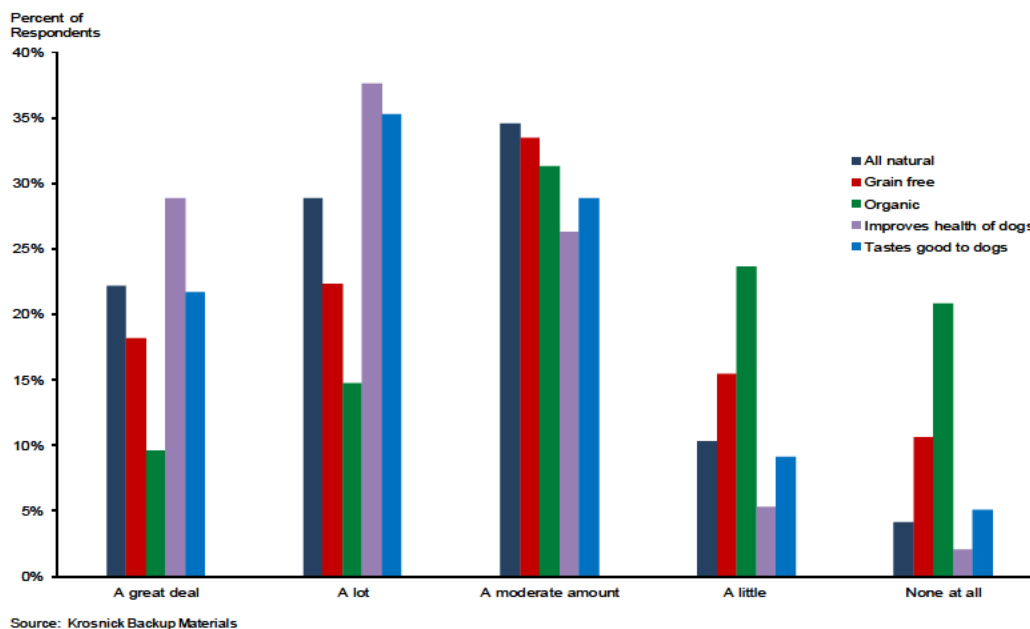
²⁴⁷ “Q&A: Vets Weigh in on Fido’s Food,” *Consumer Reports*, March 2009, <https://www.consumerreports.org/cro/2012/05/q-a-vets-weigh-in-on-fido-s-food/index.htm>.

²⁴⁸ Shoaff Deposition, p. 31:19–25; Reitman Deposition, pp. 50:7–55:21; Deposition of Erin Grant (“Grant Deposition”), June 28, 2019, pp. 39:3–40:24. Note that Ms. Shoaff, Ms. Reitman and Ms. Grant are named plaintiffs in a similar matter and are purchasers of Champion dog food. See Third Amended Class Action Complaint, *Jennifer Reitman, Carol Shoaff, and Erin Grant et al v. Champion Petfoods USA, Inc. and Champion Petfoods LP*, United States District Court for the Central District of California Western Division, Case No. 2:18-cv-01736-DOC-JPR, May 25, 2019.

²⁴⁹ Krosnick Report Part 2, Appendix B, pp. 546–547.

were provided the following answer options to choose from: “[a] great deal [of attention],” “[a] lot [of attention],” “[a] moderate amount [of attention],” “[a] little [attention],” and “[n]one at all.”²⁵⁰ I plotted the results in Figure 1, which shows that the level of attention respondents indicated they would pay for different product characteristics when deciding which dog food to buy varied substantially across respondents. For instance, approximately 22% of respondents indicated paying “a great deal of attention” to whether the dog food is “all natural” when deciding which dog food to buy, approximately 29% indicated paying “a lot of attention,” approximately 35% indicated paying “a moderate amount of attention,” approximately 10% indicated paying “a little attention,” and approximately 4% indicated paying no attention at all to whether the dog food is “all natural” when deciding which dog food to buy.

Figure 1
Distribution of Responses in Dr. Krosnick’s Diminution in Value Survey by Dog Food Characteristic



146. In some cases, heterogeneity in preferences may vary with consumers’ demographic background, such as age or income. For example, according to the U.S. Dog Pet Food Survey, consumers age 55 and older care more about nutritional quality, while consumers under age 55 are more concerned with fresh ingredients, quantity and type of meat, and carbohydrate percentage.²⁵¹

²⁵⁰ Krosnick Report Part 2, Appendix B, pp. 546–547.

²⁵¹ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 478.

147. Even among the named plaintiffs in this matter and related matters, I identified significant variation in preferences for different product characteristics, including those relating to the allegations in this case. For example, Ms. Reitman and Ms. Shoaff report different preferences regarding “regional” product ingredients. Ms. Shoaff testified during her deposition that she “found it important [...] that the ingredients were local.”²⁵² Ms. Reitman, on the other hand, testified that the region that the lamb came from was not important to her, as she was more concerned with quality than geographical origin, and understood that New Zealand is known for the quality of sheep and lamb.²⁵³ Mr. Weaver testified that he liked that the fish in the dog food he purchased was sourced from New England “[b]ecause it’s fresh, that’s where the fish are,” even though he stated that New England is not regional to Wisconsin (where Mr. Weaver lives).²⁵⁴ Thus, the importance and interpretation of terms such as “fresh” and “regional” varies substantially across named Plaintiffs in this matter and related matters.

148. Dog food product purchase decisions typically also incorporate the dietary restrictions and requirements of the pets. For example, some dogs suffer from food allergies and intolerances, which I understand often relate to the consumption of specific animal proteins.²⁵⁵ Weight and dental concerns also affect the varying needs of dogs.²⁵⁶ These types of considerations are likely to be particularly important for ACANA and ORIJEN purchasers as some of these products are specifically designed for pets with dietary sensitivities, such as the ACANA Lamb and Apple Singles.²⁵⁷

149. Plaintiffs in this case and in similar matters report considering and changing dog foods based on the specific dietary needs of their dogs. Ms. Reitman recalls switching her dog, Goliath, to a “bland food diet” after he developed stomach problems.²⁵⁸ Goliath’s

²⁵² Shoaff Deposition, p. 81:2–3.

²⁵³ Reitman Deposition, pp. 111:2–111:24. Similarly, Ms. Slawsby testified that while she noticed the label identifying where ingredients were sourced, this information was “not on the forefront of [her] mind” when she made her purchase decision. Slawsby Deposition, p. 172:2–14.

²⁵⁴ Weaver Deposition, pp. 83:9–84:20.

²⁵⁵ “What Every Pet Owner Should Know about Food Allergies,” *Clinical Nutrition Service at Cummings School*, January 27, 2017, <http://vetnutrition.tufts.edu/2017/01/food-allergies/>.

²⁵⁶ “How to Choose the Best Pet Food for Puppies,” *VetStreet*, March 11, 2014, <http://www.vetstreet.com/dr-marty-becker/how-to-choose-the-best-pet-food-for-puppies>; “Why You Should Tailor your Dog’s Food to Their Age and Breed,” *The Telegraph*, December 15, 2017, <https://www.telegraph.co.uk/pets/family-animals/choose-the-right-food-for-your-dog/>.

²⁵⁷ “Feed the Adventure,” *Acana*, <https://acana.com/wp-content/uploads/2019/05/DS-ACA-Pet-Lover-Brochure-web.pdf>, at slide 6.

²⁵⁸ Reitman Deposition, p. 44:2–9.

stomach issues also encouraged Ms. Reitman to purchase Champion products with fewer ingredients, such as those containing only duck rather than multiple types of protein.²⁵⁹ Ms. Grant also reports having to try “countless different bags of dog foods” because her dog, Dublynn, had severe allergies.²⁶⁰ Ms. Grant eventually discovered that Dublynn was allergic to chicken, and started purchasing only chicken-free diets.²⁶¹ Mr. Weaver also reports having to tailor his dog food purchases for this reason. His dog, Jack, was allergic to fish and poultry, so Mr. Weaver avoided any diets with those ingredients.²⁶² Ms. Shoaff started feeding her dogs, Tanner and Gracie, Solid Gold dog food until Tanner developed pancreatitis and needed to switch to a diet with a lower fat content.²⁶³ When her dog Danny developed early signs of dementia, Ms. Shoaff switched his diet to a special cognitive formula.²⁶⁴

150. I also understand that different varieties of dog food are suited for different dogs, depending on their age. Puppies require “easy-to-digest carbohydrates,” and specific nutrients such as calcium, phosphorus, antioxidants, and vitamins C and E.²⁶⁵ Senior dogs may require a diet rich in omega-3 and fatty acids.²⁶⁶ Senior dogs also tend to be less active than puppies, so owners are advised to adjust calorie counts accordingly.²⁶⁷ Additionally, different breeds of dogs may require different types of foods. Small or toy breed dogs tend to have high metabolisms and may require food with a high energy content that is also easy to swallow and digest.²⁶⁸ Large and giant breeds reach adulthood quickly and are particularly prone to joint issues, so they may need omega-3 and omega-6 fatty acids, glucosamine, and

²⁵⁹ Reitman Deposition, pp. 101:3–102:12.

²⁶⁰ Grant Deposition, p. 15:18–21.

²⁶¹ Grant Deposition, p. 14:2–11.

²⁶² Weaver Deposition, pp. 34:4–9; 47:23–25.

²⁶³ Shoaff Deposition, pp. 62:25–63:12.

²⁶⁴ Shoaff Deposition, p. 31:19–25.

²⁶⁵ “Why You Should Tailor Your Dog’s Food to Their Age and Breed,” *The Telegraph*, December 15, 2017, <https://www.telegraph.co.uk/pets/family-animals/choose-the-right-food-for-your-dog/>.

²⁶⁶ “Why You Should Tailor Your Dog’s Food to Their Age and Breed,” *The Telegraph*, December 15, 2017, <https://www.telegraph.co.uk/pets/family-animals/choose-the-right-food-for-your-dog/>.

²⁶⁷ “Why You Should Tailor Your Dog’s Food to Their Age and Breed,” *The Telegraph*, December 15, 2017, <https://www.telegraph.co.uk/pets/family-animals/choose-the-right-food-for-your-dog/>.

²⁶⁸ “Why You Should Tailor Your Dog’s Food to Their Age and Breed,” *The Telegraph*, December 15, 2017, <https://www.telegraph.co.uk/pets/family-animals/choose-the-right-food-for-your-dog/>.

chondroitin sulphate.²⁶⁹ Dogs with flat faces like pugs or French bulldogs often require food of particular shapes and textures.²⁷⁰

151. Given that dog food is purchased by owners for their dog's consumption, it is not surprising that the specific tastes of the pet are important to the purchase decision. According to the U.S. Dog Pet Food Survey, 66 percent of respondents indicated that they evaluate dog food products on whether or not their dog likes the food.²⁷¹ Consistent with this, Ms. Reitman testified that she had two dogs and while one liked raw food, the other did not "find it palatable."²⁷² She recalled "changing flavor to flavor" in order to find a food her dog enjoyed.²⁷³ According to the U.S. Dog Pet Food Survey, the average number of factors used by respondents to judge the dog food they have purchased is 3.1, although different consumers rely on different factors.²⁷⁴

152. Pet owners may also consider the advice of experts and other third parties (such as their veterinarian, online research, family and friends, and packaging information) when deciding which dog food to purchase.²⁷⁵ According to an article published on *Pet MD*, more than 75 percent of pet owners consider the nutritional advice of their veterinarian.²⁷⁶ The U.S. Dog Pet Food Survey similarly found that 57 percent of the 1,001 respondents identified their veterinarian as a "source of information [they] rel[ied] on...to determine what to feed [their] dog," while 28 percent identified their veterinarian as the source of information they relied on the most in their purchase decision-making process.²⁷⁷ According to the same survey, 61

²⁶⁹ "Why You Should Tailor Your Dog's Food to Their Age and Breed," *The Telegraph*, December 15, 2017, <https://www.telegraph.co.uk/pets/family-animals/choose-the-right-food-for-your-dog/>.

²⁷⁰ "Why You Should Tailor Your Dog's Food to Their Age and Breed," *The Telegraph*, December 15, 2017, <https://www.telegraph.co.uk/pets/family-animals/choose-the-right-food-for-your-dog/>.

²⁷¹ "Brand Finance U.S. Dog Pet Food Survey," *Brand Finance*, January 13, 2017, CPF0145434–5538 at 463.

²⁷² Reitman Deposition, pp. 48:21–49:4.

²⁷³ Reitman Deposition, p. 52:3–15. Similarly, Ms. Loeb reported trying to feed her dog Fromm, a competitor of Champion, but changing because her dog did not seem to like it. Loeb Deposition, pp. 25:19–26:4. Note that Ms. Kellie Loeb is a named plaintiff in a similar matter and a purchaser of Champion dog food. *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-494, March 28, 2018. This case was dismissed by the Court. See Order on Defendants Motion to Dismiss, *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-CV-494-JPS, June 7, 2018; Order on Summary Judgment, *Kellie Loeb v. Champion Petfoods USA Inc. and Champion Petfoods LP*, United States District Court for the Eastern District of Wisconsin, Case No. 18-CV-494-JPS, February 6, 2019.

²⁷⁴ "Brand Finance U.S. Dog Pet Food Survey," *Brand Finance*, January 13, 2017, CPF0145434–5538, at 463.

²⁷⁵ All of the 1,001 respondents used two or more sources, while the average number of sources relied upon is 3.1. See "Brand Finance U.S. Dog Pet Food Survey," *Brand Finance*, January 13, 2017, CPF0145434–5538, at 459.

²⁷⁶ "Buying & Choosing Pet Food is Priority, petMD Survey Finds," *PetMD*, <https://www.petmd.com/dog/nutrition/buying-choosing-pet-food-priority-petmd-survey-finds>.

²⁷⁷ "Brand Finance U.S. Dog Pet Food Survey," *Brand Finance*, January 13, 2017, CPF0145434–5538, at 459.

percent of 1,001 respondents considered “Veterinarian’s Recommendation” as “very influential” or “most influential” in deciding which dog food brand to purchase.²⁷⁸ These figures are even higher for respondents who were considered most likely to purchase Champion products, with 33 percent of respondents with household incomes above \$60,000 reporting that they relied on information from their veterinarian the most.²⁷⁹ In addition, 50 percent of ACANA and/or ORIJEN purchasers reported that the dog food was recommended to them by their veterinarian.²⁸⁰ Ms. Reitman and Ms. Shoaff both testified that they spoke with their dogs’ veterinarians about which dog food to purchase.²⁸¹ Mr. Weaver reported that he switched dog foods based on a recommendation from his breeder.²⁸² Ms. Grant, on the other hand, did not rely on a veterinarian or a breeder, but on recommendations from friends and employees at the rescue center where she acquired her dogs.²⁸³

153. In an article published on *Petfood Industry*, Mr. Peter Muhlenfeld, Champion’s former Chief Brand Officer, explained the important role that pet specialists play in the sale of Champion’s products. He stated that: “Pet specialists have an intimate knowledge of our foods, are committed to providing expert advice and have played a crucial role in bringing our biologically appropriate foods to pet lovers everywhere.”²⁸⁴ Furthermore, according to the U.S. Dog Pet Food Survey, 46 percent of respondents who shopped in specialty pet stores indicated that they found an employee’s recommendation influential, and only 16 percent of respondents who shopped at specialty stores reported relying on packaging information when making their purchasing decision.²⁸⁵ Forty-five percent of ACANA and/or ORIJEN purchasers reported that the food was recommended to them by store staff.²⁸⁶

154. In addition, “brand” is a set of associations that create the personality of a product, and can be established and communicated in different ways.²⁸⁷ For example, advertisements for Apple products may emphasize their user-friendliness and clean designs. Champion’s

²⁷⁸ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 479.

²⁷⁹ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 459.

²⁸⁰ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 509.

²⁸¹ Reitman Deposition, pp. 44:2–9; Shoaff Deposition, pp. 84:15–85:9.

²⁸² Weaver Deposition, pp. 29:8–30:8.

²⁸³ Grant Deposition, pp. 29:14–24; 66:25–67:1.

²⁸⁴ “Bentley’s Applauds Pet Food Companies for Leaving Chewy,” *Petfood Industry*, July 17, 2017, <https://www.petfoodindustry.com/articles/6562-bentleys-applauds-pet-food-companies-for-leaving-chewy>.

²⁸⁵ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 459, 479.

²⁸⁶ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 512.

²⁸⁷ Kotler, P. and K. L. Keller (2012), “Creating Brand Equity,” in *Marketing Management*, Upper Saddle River, NJ: Prentice Hall, 321–356.

marketing of the ACANA and ORIJEN brands are also different and are based on the associations with each brand. For example, according to each brand's guide, ACANA is worldly, loyal, accessible, authentic, and devoted whereas ORIJEN is educated, travelled, cultured, philanthropic, and devoted.²⁸⁸

155. The influence of brand on consumer decision-making can vary depending on each consumer's preferences and characteristics. For example, some consumers tend to repeatedly purchase a brand's products once they determine which brand they prefer, while others are not loyal to a particular brand and frequently switch brands.²⁸⁹ According to the U.S. Dog Pet Food Survey, 83 percent of the respondents indicated that they purchased the same brand of dry dog food they were purchasing a year ago and 67 percent of the respondents reported that if the variety or flavor of the brand they normally purchase were not available, they would purchase another variety or flavor of the same brand or visit another store to find the variety or flavor of the brand they normally purchase, demonstrating the importance of brand for dog food purchases.²⁹⁰ In fact, Mr. Weaver stated that he would "literally drive around to all of the Mounds stores...to purchase the exact same brand."²⁹¹

C. Place

156. Place, or the purchasing environment, also impacts consumers' purchase decisions. Retail environments can be physical or virtual, and a given retailer will often have both physical and virtual stores (*e.g.*, Walmart sells both through its stores and through Walmart.com).²⁹² Both physical and online retail environments vary widely and can significantly impact a product's sales. For example, the availability of consumer product reviews and the content of those reviews in online retail environments can influence purchase

²⁸⁸ "ACANA Brand Guide," August 2017, CPF0217710-7760, at 716; "Orijen Brand Guidelines," August 2017, CPF0217658-7709, at 664.

²⁸⁹ Macdonald, E. K. and B. M. Sharp (2000), "Brand Awareness Effects on Consumer Decision Making for a Common, Repeat Purchase Product: A Replication," *Journal of Business Research*, 48, 5-15.

²⁹⁰ "Brand Finance U.S. Dog Pet Food Survey," *Brand Finance*, January 13, 2017, CPF0145434-5538, at 458, 505, 513.

²⁹¹ Weaver Deposition, p. 32:11-13.

²⁹² Peter, J. P. and J. C. Olson (2010), "Consumer Behavior, Electronic Commerce, and Channel Strategy," in *Consumer Behavior and Marketing Strategy*, New York, NY: McGraw-Hill/Irwin, 461-489; "Our History," Walmart, <http://corporate.walmart.com/our-story/history/history-timeline>.

decisions.²⁹³ Product placement within a particular retail outlet can also affect sales volume and how consumers view a product.²⁹⁴

157. Until July 2017, Champion sold ACANA and ORIJEN dry dog food products through Chewy.com, an online retailer.²⁹⁵ Additionally, unauthorized online retailers such as Jet, Walmart, and eBay sell or have sold Champion products.²⁹⁶ The types of information reviewed and relied upon by putative class members who used online distribution channels are inherently different from the information reviewed and relied upon by other putative class members who purchased At-Issue Products in specialty stores like Mr. Weaver, Ms. Reitman and Ms. Shoaff.²⁹⁷ In fact, Ms. Reitman believes that a store clerk may have directly influenced her decision to purchase ACANA.²⁹⁸ On the other hand, Ms. Grant purchased her dog food primarily online at Petflow.com.²⁹⁹ Again, putative class members who purchased ACANA and ORIJEN products at specialty stores and putative class members who purchased ACANA and ORIJEN products online will vary in terms of what information they were exposed to and the manner in which they were exposed.

D. Promotion

158. Promotional aspects will also affect product sales. Promotion generally captures the sum total of communications that the marketer uses.³⁰⁰ Different types of promotional activities, such as advertising (which can be product-specific or aimed at creating or

²⁹³ Zhu, F. and X. Zhang (2010), "Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics," *Journal of Marketing* 74, 2, 133–148.

²⁹⁴ Peter, J. P. and J. C. Olson (2010), "Consumer Behavior, Electronic Commerce, and Channel Strategy," in *Consumer Behavior and Marketing Strategy*, New York, NY: McGraw-Hill/Irwin, 461–489.

²⁹⁵ On July 10, 2017, Champion announced on social media that it would no longer sell ACANA and ORIJEN products through Chewy: "Unfortunately, it's true – our foods are no longer available through Chewy... For more than 25 years, we've been committed to the pet specialty channel. We choose to work exclusively with pet specialists who have intimate knowledge of our foods and are committed to providing expert advice to Pet Lovers. Chewy has been a longtime retail partner and we've enjoyed our association with them. However, due to their recent acquisition, Chewy no longer meets our pet specialty requirement to be an Approved ACANA and ORIJEN Retailer." See "Fromm, Champion Pull Products from Chewy," *Petfood Industry*, July 12, 2017, <https://www.petfoodindustry.com/articles/6552-fromm-champion-pull-products-from-chewycom>.

²⁹⁶ "Trusted Pet Specialists," *Champion Petfoods*, <https://www.championpetfoods.com/en-us/where-to-buy/>. In April 2017, Champion discovered that its foods were being sold through unauthorized websites. In a Social Media post, Champion claimed that it "cannot guarantee how these foods are obtained and stored." See "Champion Petfoods," *Facebook*, April 11, 2017, <https://www.facebook.com/ChampionPetfoods/posts/1276982962380041>.

²⁹⁷ Weaver Deposition, p. 52:12–14, Reitman Deposition, pp. 55:7–56:5, 71:7–13, and Shoaff Deposition, p. 46:4–15.

²⁹⁸ Reitman Deposition, pp. 70:25–71:13.

²⁹⁹ Grant Deposition, 18:17.

³⁰⁰ Peter J. P. and J. C. Olson (2010), "Consumer Behavior and Promotion Strategy," in *Consumer Behavior and Marketing Strategy*, New York, NY: McGraw-Hill/Irwin, 405–438.

reinforcing a broader brand image) or sales promotions (*e.g.*, point of purchase displays, coupons, or rebates) can impact purchase decisions in different ways. Both manufacturers and retailers may run promotions. According to the U.S. Dog Pet Food Survey, 28 percent of respondents reported that promotions were “very influential” when deciding which brand of dog food to purchase and 10 percent of respondents considered free samples when deciding where to purchase their dog food.³⁰¹ Mr. Weaver, for example, only purchased ORIJEN dog food from a store called Mounds in order to take advantage of a promotion offering every twelfth bag of ORIJEN dog food for free.³⁰² Ms. Shoaff also took advantage of a similar promotion at a store called Animal Connection. After she purchased eleven bags and received the free bag, she switched to shopping at a different store.³⁰³ Similarly, Ms. Grant received a discount on PetFlow.com for being a regular customer.³⁰⁴ Due to the myriad communication channels available to marketers, the promotion environment can vary significantly from consumer to consumer.

* * *

159. In sum, various dimensions of the marketing mix may affect different consumers in different ways. Furthermore, different purchasers have different preferences. The factors that are important to purchase decisions will vary from one consumer to another, with different consumers assigning different weights to each factor.³⁰⁵ Therefore, the purchase decision-making process of the putative class members is bound to be heterogeneous and the impact (if any) of the alleged misrepresentations of the At-Issue Products cannot be estimated on a class-wide basis.

³⁰¹ “Brand Finance U.S. Dog Pet Food Survey,” *Brand Finance*, January 13, 2017, CPF0145434–5538, at 468, 480.

³⁰² Weaver Deposition, pp. 33:6–11, 52:9–11.

³⁰³ Shoaff Deposition, pp. 79:21–80:10.

³⁰⁴ Grant Deposition, pp. 68:16–69:6.

³⁰⁵ For a quantification of some of these buyer influence factors I refer to: Hanssens, D. M., ed. (2015), *Empirical Generalizations about Marketing Impact*, Cambridge, MA: Marketing Science Institute, and J. Alba, ed. (2011), *Consumer Insights: Findings from Behavioral Research*, Cambridge, MA: Marketing Science Institute.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge, information, and belief, and that this declaration is executed at Los Angeles, California, this 12th day of September, 2019.

A handwritten signature in cursive script, reading "Dominique M. Hanssens", written in dark ink.

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Graduate Instructor, School of Industrial Management, 1975-76

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RESEARCH

Books and Monographs

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D.M. Hanssens, "Market Response, Competitive Behavior and Time-Series Analysis," *Journal of Marketing Research*, November 1980.

Finalist for the 1985 William O'Dell Award.

D.M. Hanssens, "Bivariate Time-Series Analysis of the Relationship between Advertising and Sales," *Applied Economics*, September 1980.

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TEACHING

Courses Taught at UCLA

Elements of Marketing (MBA)
Mathematical Models in Marketing (MBA/PhD)
International Marketing (MBA)
Quantitative Research in Marketing (PhD)
Time Series Analysis (PhD/MBA)
Special Research Topics in Marketing (PhD)
Management Field Studies Advisorship (MBA)
Directed Readings in Applied Econometrics and International Marketing (PhD/MBA)
Workshop in Marketing (PhD)
Data Analysis and Decisions under Uncertainty (Executive MBA)
Research in Marketing Management (Ph.D.)
Marketing Strategy and Policy (Executive MBA)
Marketing Strategy and Planning (MBA)
Action Research Project (Executive MBA)
Customer Information Strategy (Executive MBA)
Managerial Problem Solving (MBA)
Marketing Management II (MBA)
Marketing Strategy and Planning: Focus on Central & Eastern Europe (MBA)

Doctoral Committees

As chair or co-chair:

Bonita J. Campbell, PhD Management, 1979. Professor of Engineering, California State University, Northridge
Yoshi Sugita, PhD Management, 1985. Professor of Economics, Gakushuin Univ. Tokyo
Abhik Roy, PhD Management, 1989. Professor of Marketing, Quinnipiac University
Keiko Powers, PhD Psychology, 1990. Senior Marketing Scientist, MarketShare.
Maria Cison, PhD Economics, 1990. Economist, General Motors Corporation, Detroit
Marnik Dekimpe, PhD Management, 1992. Research Professor, Tilburg University
Koen Pauwels, PhD Management, 2001. Professor, Northeastern University
Julian Villanueva, PhD Management, 2003. Professor, IESE, Madrid
Shijin Yoo, PhD Management, 2004. Professor, Korea University
Amit Joshi, PhD Management, 2005. Professor, IMD, Lausanne
Hyun Shin, PhD Management, 2008. Associate Professor, Hanyang Univ., Korea
Rafael Becerril, PhD Management, 2013. Assistant Professor, Univ. of South Carolina
Ho Kim, PhD Management, 2013. Assistant Professor, Univ. of Missouri, St. Louis

As member:

Luiz Caleffe, PhD Education, 1980
Hubert Gatignon, PhD Management, 1981
Douglas Nigh, PhD Management, 1981

Marjorie Chan, PhD Management, 1981
Daniel Wunsch, PhD Education, 1981
Mary Kreik, Dr. Public Health, 1982
Ngina Lythcott, Dr. Public Health, 1982
Harish Sujana, PhD Management, 1983
Sharon Garrett, PhD Public Health, 1983
Jan Ouren, PhD Public Health, 1983
Robert Curtis, PhD Management, 1985
Melvyn Menezes, PhD Management, 1985
Benoit Boyer, PhD Management, 1987
Kannan Srinivasan, PhD Management, 1986
Harold Stanislaw, PhD Psychology, 1987
Leon Crabbe, PhD Economics, 1988
Joao Assuncao, PhD Management, 1990
Parvish Nourjah, PhD Epidemiology, 1991
Ronald Rivas, PhD Management, 1997
Ronald Dietel, EdD Education, 1997
Reza Sadri, PhD Computer Science, 2001
Catarina Sismeiro, PhD Management, 2002
Yan-Nei Law, PhD Computer Science, 2005
Wayne Taylor, PhD Management, 2017

As external member:

Katrijn Gielens, Doctor in Applied Economics, Catholic University of Leuven, 1999
Vincent Nijs, Doctor in Applied Economics, Catholic University of Leuven, 2001
Marcel Kornelis, Doctor in Economics, University of Groningen, 2002
Isaac Dinner, PhD, Columbia University, 2011
Ofer Mintz, PhD, University of California, Irvine, 2011
Chloe Moon, PhD, University of California, Riverside, in progress

Executive Seminars

IBM Visitors Program, UCLA, 1978, 1981
Japan Productivity Center, UCLA, 1978
Hochschule St. Gallen, UCLA, 1979
West Entertainment, UCLA, 1979
UCLA Executive Program, 1979--
UCLA Marketing Management Program, 1979-82
UCLA Medical Marketing Program, 1980--
Eli Lilly International, Los Angeles, 1980
Engineering Management Program, UCLA Extension, 1980
Sommer Allibert, UCLA Extension, 1980
UCLA New Product Development and Marketing Program, 1981-83
Continental Airlines, Los Angeles, 1981
National Taiwan University Program, UCLA, 1981
UCLA Mexican Executive Program, Monterrey, 1981
European Institute for Advanced Studies in Management, 1984

UCLA Pricing Program, 1989-1999
UCLA Law Institute Program, 1991-92
UCLA Advanced Executive Program, 1993--
Hewlett-Packard Corporate Education, 1993--
UCLA Hughes Marketing Program, 1993--1998
UCLA Johnson & Johnson Program, 1993
UCLA-London Business School Medical Marketing Program, 1994
Beiersdorf, 1994-1999
UCLA Northrop-Grumman Marketing program, 1996--1999
Wells Fargo Bank, 1995--
President Enterprises, Taiwan, 1997
Instituto Argentino de Ejecutivos de Finanzas, 1997
Unilever, 1998
PriceWaterhouseCoopers, 2000
Columbia University Executive Program, 2001
Marketing Strategy in the Information Age, 2000-02
Faculty Director, 2000-02
UCLA Strategic Leadership Institute, 2000-2003
Ambrosetti, Italy, 2002, 2004, 2005, 2006
Credit Suisse, 2002-03
University of California San Diego, Executive Program, 2003
Auchan, France, 2004
Gen-Probe, San Diego, 2004
Numico, Singapore, 2006
Greater Paris Investment Agency, 2007
SAS Forum, Madrid, 2007
Marketing Roundtable, Georgia State University, 2008
Amgen, 2008
Baptie CMO Community, 2008
Korea Productivity Center, 2009
Coca-Cola Latin America, 2010
Adobe, 2012
Teradata, 2013, 2015
American Bar Association, 2013
Hollywood IT Society, 2015, 2016
World Marketing Summit, Tokyo, 2016
Forbes CMO Summit, 2018
World Marketing Summit, Istanbul, 2018
World Marketing Summit, Tokyo, 2019

ADMINISTRATION

Executive Director, Marketing Science Institute, Cambridge, Massachusetts, 2005-2007

MSI is a not-for-profit institute founded in 1961 with the mission of bringing together the leading academics and practitioners in marketing to create knowledge that improves business performance. The Executive Director serves a two-year term, overseeing the research priorities, research grants, conference content, publications, collaborative research and other programs of the Institute. He or she also serves as key liaison between the MSI member companies and academic researchers.

Executive Positions at UCLA, Anderson Graduate School of Management

Chairman, 1988-1990

Chief academic officer for the 150 full-time and part-time faculty of the sole department in the school. Key responsibilities include hiring, promotion, salary negotiations, course assignments, summer research funding, departmental organization and budgeting. Position involves extensive contacts with the dean of the school and the university administration.

Associate Dean, Academic Affairs & Strategic Planning, 1991-1993

Responsible for all degree programs, interdisciplinary research centers, and information technology services of the school. Also charged with developing a strategic plan for the school. Position involves extensive contacts with the external constituencies. Acts as dean of the school in his absence.

Vice-President, Management Education Associates, 1991-1993

Faculty Director, Global Executive MBA Program for the Americas, 2010-2013

Faculty Director, Morrison Center for Marketing and Data Analytics, 2015-2016

Other Administrative Functions

UCLA Anderson School of Management

Marketing Area Chair, 1984-87, 1993-96, 1999-00, 2004-05, 2007-09, 2012-14.

Elected Member of Staffing Committee, 1982-83, 1984-86, 2000-02.

Chairman, Research Committee, 1986-88

Research Committee, 1990-1998, 2008-2013

Chairman, Executive Education Committee, 1993--95

Advisory Board member, Center for Corporate Renewal, 1995-1998

Elected Member of Faculty Executive Committee, 1997-2000, 2010-2013.

Board of Visitors Marketing Task Force, 1997-98, 2002-03

Teaching Improvement Committee, 1998-01

Advisory Board member, Center for Management in the Information Economy, 2000-02

Chairman, Faculty Advisory Board, Entertainment Research Center, 2002-2004

Faculty Director, Entertainment & Media Management Institute, 2004-05.
Compensation Task Force, 2011
Co-chair, UCLA Anderson Task Force on Branding, 2011-2012

University of California

Review Committee, UC Irvine Graduate School of Management, 1988
Chairman, UCLA Task Force on Economic Reconstruction and Development, 1992
Task Force on UCLA Faculty Workload, 1993--94
Task Force on Part-Time Masters Programs, 1993--94
Clinical Scholars Program Committee, UCLA School of Medicine, 1997-2002
Dean Search Committee, UCLA School of Education, 1999
Chairman, Dean Review Committee, UCLA School of Letters and Sciences, 2001-02
Dean Review Committee, UCLA Extension, 2011
Faculty Welfare Committee, UCLA Academic Senate, 2011-2014
Dean Search Committee, UCLA Extension, 2013
Vice Chancellor Search Committee, UCLA, 2015
External Review Committee, Samueli School of Engineering, UC Irvine, 2016

Other

Faculty Advisory Board, Gemini Consulting, San Francisco, 1988-1997
Marketing Advisory Board, KeraVision, San Jose, 1995-1999
Board of Directors, i-Mind Education Systems, 1998-2001
Academic Trustee, Marketing Science Institute, Boston, 2002-2005
Executive Committee, Marketing Science Institute, Boston, 2005-2011.
External Review Committee, Wharton School Marketing Department, 2003
Member, UCLA Committee on Research, 2003-2005.
Founding Director, Marketing Accountability Standards Board (MASB), 2006-2017
External Review Committee, New York University Marketing Department, 2008
Selection Committee, AMA Irwin Distinguished Marketing Educator Award, 2006-2009
Chairman, 2008-2009
Board of Directors, MarketShare, Los Angeles, 2006-2015.
International Advisory Board, HEC School of Management, Paris, 2009-2015.
External Review Committee, Erasmus Research Institute of Management, Rotterdam, 2010
Academic Advisory Board, Unilever Marketing Science Unit, London, 2012-2015
Supervisory Board, Erasmus University Research Institute of Management, 2012-
Senior Advisor, Cornerstone Research, 2014-
Advisory Board, MarketShare, Los Angeles, 2016-17.
President, INFORMS Society for Marketing Science, 2016-17.

PROFESSIONAL SERVICE

Grants

UCLA Alcohol Research Center, \$39,000, for a study of regulation effect on alcohol consumption, 1979-80 (with S.I. Ornstein)

Director, Robert Anderson Research Endowment in Management, \$250,000, 1988-93, 1997-99

Columbia Charitable Foundation, \$230,000, Information Technology Planning Grant, 1991-1992

Director, William Leonhard Research Endowment in Management, \$200,000, 1993-97

Various Marketing Science Institute research grants, 1996-present

Editorial Boards

Journal of Marketing Research, 1984-88 and 2003-05

Journal of Marketing Research, Associate Editor, 2007-10

Journal of Marketing Research, Editor's Advisory Board, 2010-16

Journal of Marketing, Associate Editor, 2014-16

Journal of Marketing, Special Issue Co-Editor, 2007-09

Marketing Science, 1983-94

Marketing Science, Area Editor, 1988-91

Marketing Science, Editor's Advisory Board, 2010-15

Marketing Science, Special Issue Co-Editor, 2013-16

Management Science, Associate Editor, 1978-88

Recherche et Applications en Marketing, 1987-

International Journal of Research in Marketing, 1993-2003

International Journal of Research in Marketing, Associate Editor, 2009-2016

Applied Marketing Analytics, Editorial Board, 2014-

Ad Hoc Reviewing

Marketing Science, 1981-82

Journal of Forecasting, 1981--

Management Science, 1981--

Journal of Marketing Research, 1981-83

Journal of Consumer Research, 1982--

Interfaces, 1992--

Decision Sciences, 1982--

International Journal of Research in Marketing, 1983-92

Computers & Industrial Engineering, 1983--

Journal of Business & Economic Statistics, 1984--

Journal of Product Innovation Management, 1984--

Psychometrika, 1985--

National Science Foundation, 1984--

Communications in Statistics, 1987--

Journal of Time Series Analysis, 1988--

Journal of Marketing, 1987--
International Journal of Forecasting, 1992--
Journal of Econometrics, 1996-
Marketing Letters, 1996-
Research Council of the United Kingdom, 1997
Research Foundation – Flanders, 2016

Invited Research Seminars

2019 Columbia University*
Harvard Law School*
2018 IESE, Barcelona*
BI Norwegian School of Management*
2017 University of Groningen*
University of California, Riverside
2016 University of Tennessee
University of Pennsylvania, Wharton School
Indiana University, University of Notre Dame*,
Chinese University of Hong Kong*
University of Oxford
2015 University of Kansas, University of South Carolina,
London Business School, New York University*,
Bogazici University, Istanbul*, Tilburg University*
2014 University of Maryland, Northwestern University,
Universität zu Köln, Tohoku University
2013 University of Michigan
2012 University of Texas, Austin, University of Central Florida,
University of Florida, Fudan University Shanghai,
University of Washington
2011 Boston University*, University of Utah
2010 University of California, Davis, University of North Carolina,
Texas Christian University, Erasmus University, Rotterdam*
BI Norwegian School of Management*
2009 Korea University*, Georgia State University*, University of Arizona
2008 UCLA Anderson Faculty Lecture Series, University of Minnesota,
Tilburg University*, University of Missouri, Georgia State University
2007 Boston University, Columbia University, Arizona State University
2006 University of Groningen*, Harvard Business School,
Emory University, Texas A&M University,
University of Maryland, Massachusetts Institute of Technology,
Dartmouth College (2006)
2005 Washington University, St. Louis, Ohio State University,
Singapore Management University, University of Connecticut
Yale University, MIT Data Center
2004 UCLA Marschak Interdisciplinary Colloquium, University of California, San Diego,
UCLA Finance Seminar Series, Koc University, Istanbul
2003 Tulane University, Dartmouth College, McGill University,
Tilburg University, Duke University
2002 University of Texas, Austin, Erasmus University, University of Groningen

2001 University of Texas at Dallas, Simon Fraser University,
 Tilburg University
 2000 AMA Advanced Research Forum, Monterey, University of Western Ontario
 1999 University of California, Riverside, University of Southern California,
 Georgetown University, UCLA Anderson Faculty Lecture Series
 1998 Humboldt University, Berlin, Northwestern University
 1997 University of Cambridge, University of Washington Marketing Camp
 1996 University of California, Berkeley, University of Budapest,
 Marketing Science Institute (1996-present)
 1995 University of Texas, Austin, University of California, Irvine,
 Universitat Mainz
 1994 Catholic University of Leuven, University of Iowa,
 Hong Kong University of Science & Technology
 1991 INSEAD, Catholic University of Leuven Law School
 1990 Catholic University of Leuven, Washington University, St. Louis,
 University of Florida, AMA Doctoral Consortium
 1989 Georgetown University, Columbia University Marketing Camp
 1987 Columbia University
 1986 University of Houston
 1985 Carnegie-Mellon University
 1984 Washington State University, HEC Paris, Universidad de Zaragoza,
 Universiteit Antwerpen, Universite de Mons, Universiteit Gent,
 Universitat Bielefeld
 1983 UCLA Economics Department
 1982 University of Texas at Dallas, University of Washington
 1981 Stanford University, Harvard University

* denote plenary lectures at conferences hosted by or at the university

Consulting

airlines: Air France
 automotive: Ford, Mercedes, Lexus
 consumer products: General Mills, Mars, Mattel Toys, Nestle, Coca-Cola
 entertainment: Sony, Electronic Arts, Xbox, Disney, NBC, Vivendi
 financial services: Home Savings, Wells Fargo, Wachovia, Schwab, CitiCorp, Fidelity
 health care: Amgen, Johnson & Johnson, Safeguard Health, GlaxoSmithKline, KeraVision
 information services: Catalina Marketing, TRW, TNS, MSN, Google
 insurance: Progressive, Zurich
 law firms: expert witness list available upon request
 marketing analytics: LiftLab, LivePerson
 public sector: US Navy Recruiting Command
 retailing: Ralphs, Wickes, Gelson's, Build-a-Bear, Albertsons
 technology: Hewlett Packard, Hughes, Xerox, Dell, Microsoft, CDW, Motorola, Intel
 telecommunications: British Columbia Telecom, British Telecom, General Telephone

Honors and Awards

2016 Wroe Alderson Award, Wharton School, University of Pennsylvania
2015 Buck Weaver Award for Lifetime Contribution to Marketing Theory & Practice, ISMS
2013 V. Mahajan Award for Career Contributions to Marketing Strategy Research, AMA
2010 Fellow, INFORMS Society for Marketing Science
2010 MSI/H. Paul Root Best Paper Award, *Journal of Marketing*
2007 Gilbert A. Churchill Lifetime Achievement Award, AMA
2007 William O'Dell Best Paper Award, *Journal of Marketing Research*
2006 Robert D. Buzzell Best Paper Award, *Marketing Science Institute*
2003 Neidorf "Decade" Teaching Award, UCLA Anderson School of Management
2003 Teaching Excellence Award, UCLA Executive MBA Program
2002 Frank M. Bass Outstanding Dissertation Award, *Marketing Science*
2001 John D.C. Little Best Paper Award, *Marketing Science*
2001 European Marketing Academy Best Paper Award
1999 Paul E. Green Best Paper Award, *Journal of Marketing Research*
1997 Teaching Excellence Award, UCLA Executive MBA Program
1995 John D.C. Little Best Paper Award, *Marketing Science*
1996 EMAC Doctoral Consortium Faculty Member
1990 AMA Doctoral Consortium Faculty member, 1990-present
1988 Teaching Excellence Award, UCLA Executive MBA Program
1983 Outstanding Reviewer Award, *Marketing Science*
1981 George Robbins Distinguished Teaching Award, UCLA School of Management
1981 Career Development Award, UCLA
1977 Member Beta Gamma Sigma (National Business Honor Society), 1977-present
1977 Purdue University representative, Albert Haring Annual Symposium
1976 Fellow, C.I.M., Brussels, Belgium (doctoral dissertation fellowship)
1975 Outstanding Teacher's Award, Purdue University

Media

Various interviews on management topics for Wall Street Journal, New York Times, Los Angeles Times, Fortune, Los Angeles Business Journal, ABC World News, NPR and other media.

Revised, September 2019

Dominique M. Hanssens, Ph.D.

Distinguished Research Professor of Marketing
UCLA Anderson School of Management

**TESTIMONY HISTORY
in the Last Four Years**

1. D. Krommenhock and S. Hadley v. Post Foods LLC, United States District Court, Northern District of California. Deposition taken on July 11, 2019.
2. J. Beaty and J. Beaty v. Ford Motor Company, United States District Court, Western District of Washington. Deposition taken on June 6, 2019.
3. J. Reitman and C. Shoaff v. Champion Petfoods, United States District Court, Central District of California, Western Division. Deposition taken on May 22, 2019.
4. Obagi Cosmeceuticals v. ZO Skin Health, Judicial Arbitration and Mediation Services. Deposition taken on April 25, 2019. Trial testimony given on May 17, 2019.
5. Liqwd, Inc. and Olaplex, LLP v. L'Oreal USA, Inc. et al., United States District Court, District of Delaware. Deposition taken on March 4, 2019.
6. Merck & Co. Inc. and Merck Sharp & Dohme Corp. v. Merck KGaA, United States District Court, District of New Jersey. Depositions taken on February 14 and 15, 2019.
7. Kellie Loeb v. Champion Petfoods, United States District Court, Eastern District of Wisconsin. Deposition taken on February 6, 2019.
8. Ryan Porter and Haarin Kwon v. NBTY Inc., United States District Court, Northern District of Illinois, Eastern Division. Deposition taken on November 29, 2018.
9. Chrysler-Dodge-Jeep Ecodiesel Marketing, Sales Practices, and Products Liability, United States District Court, Northern District of California. Deposition taken on August 17, 2018.
10. General Motors LLC Ignition Switch Litigation, United States District Court, Southern District of New York. Deposition taken on April 30, 2018.
11. The Coca-Cola Company v. Commissioner of Internal Revenue, United States Tax Court. Deposition taken on November 16, 2017. Testimony given on April 12, 2018.
12. Swiftair, LLC v. Southwest Airlines, Superior Court of the State of California. Deposition taken on September 6, 2017.
13. Lions Gate Entertainment v. TD Ameritrade and Havas Worldwide New York, United States District Court, Central District of California. Deposition taken on June 15, 2017.

14. Kobe Falco et al. v. Nissan North America, Inc., United States District Court, Central District of California. Deposition taken on May 31, 2017.
15. Brandy Varner et al. v. Dometic Corporation, United States District Court, Southern District of Florida. Deposition taken on May 18, 2017.
16. Leah Segedie et al. v. The Hain Celestial Group, Inc., United States District Court, Southern District of New York. Deposition taken on May 16, 2017.
17. The People of the State of California v. General Motors LLC, Superior Court of the State of California. Deposition taken on May 2, 2017.
18. Bahamas Surgery Center v. Kimberly-Clark Corp. and Halyard Health, Inc., United States District Court, Central District of California. Testimony given on April 5, 2017.
19. The Simms/Mann Institute v. The Honest Company, and The Honest Company v. The Simms/Mann Institute, JAMS Arbitration. Deposition taken on February 24, 2017. Testimony given on March 10, 2017.
20. Roger Larsen v. Vizio, Inc., United States District Court, Central District of California. Deposition taken on January 6, 2017.
21. Adidas America, Inc. v. Skechers USA, Inc., United States District Court, District of Oregon. Deposition taken on December 21, 2016.
22. Odyssey Wireless, Inc. v. Apple Inc., United States District Court, Southern District of California. Deposition taken on August 12, 2016.
23. State of Oregon v. Living Essentials, LLC, Circuit Court of the State of Oregon. Testimony given on July 18, 2016.
24. Svenson et al. v. Google Inc. et al., United States District Court, Northern District of California. Deposition taken on May 12, 2016.
25. Justice et al. v. Rheem Manufacturing Company, United States District Court, Southern District of Florida. Deposition taken on February 16, 2016.
26. Sanchez-Knutson v. Ford Motor Company, United States District Court, Southern District of Florida. Deposition taken on January 13, 2016.
27. Czuchaj et al. v. Conair Corporation, United States District Court, Southern District of California. Deposition taken on December 21, 2015.
28. John Romig, Jr. et al. v. Pella Corporation., U.S. District Court for the Northern District of New York. Deposition taken on October 13, 2015.

Documents Relied Upon

Academic Articles

- Allenby, G. M., et al. (2014), “Economic Valuation of Product Features,” *Quantitative Marketing and Economics*, 12, 421–456.
- Allenby, G. M., et al. (2014), “Valuation of Patented Product Features,” *The Journal of Law and Economics*, 57, 3, 629–663.
- Allenby, G., et al. (2013), “Using Conjoint Analysis to Determine the Market Value of Product Features,” *Proceedings of the Sawtooth Software Conference*, 341–355.
- Anderson, N. H. (1965), “Averaging Versus Adding as a Stimulus-Combination Rule in Impression Formation,” *Journal of Experimental Psychology*, 70, 4, 394–400.
- Arrow, K., et al. (1993), “Report of the NOAA Panel on Contingent Valuation,” *Federal Register*, 58, 10, 4601–4614.
- Banerjee, O., et al. (2018), “Estimating Benefits of Investing in Resilience of Coastal Infrastructure in Small Island Developing States: An Application to Barbados,” *Marine Policy*, 90, 78–87.
- Barabas, J. and J. Jerit (2010), “Are Survey Experiments Externally Valid?” *American Political Science Review*, 104, 2, 226–242.
- Baumeister, R. F., et al. (2001), “Bad Is Stronger Than Good,” *Review of General Psychology*, 5, 4, 323–370.
- Ben-Akiva, M., D. et al. (2018), “Foundations of Stated Preference Elicitation: Consumer Behavior and Choice-Based Conjoint Analysis,” *Foundations and Trends in Econometrics*, 10, 2, 1–124.
- Berinsky, A. J., M. F. Margolis, and M. W. Sances (2014), “Separating The Shirkers From The Workers? Making Sure Respondents Pay Attention on Self-Administered Surveys,” *American Journal of Political Science*, 58, 3, 739–753.
- Bishop, R. C., et al. (2017), “Putting a Value on Injuries to Natural Assets: The BP Oil Spill,” *Science*, 356, 6335, 253–254.
- Carson, R. T. (2000), “Contingent Valuation: A Users Guide,” *Environmental Science & Technology*, 34, 8, 1413–1418.
- Cawley, J. (2008), “Contingent Valuation Analysis of Willingness to Pay to Reduce Childhood Obesity,” *Economics & Human Biology*, 6, 2, 281–292.

- Charness, G., Gneezy, U. and Kuhn, M. A. (2012), “Experimental Methods: Between-Subject and Within-Subject Design,” *Journal of Economic Behavior & Organization*, 81, 1, 1–8.
- Hanemann, W. M. (1994), “Valuing the Environment through Contingent Valuation,” *Journal of Economic Perspectives*, 8, 4, 19–43.
- Hanemann, W. M., J. Loomis, and B. Kanninen (1991), “Statistical Efficiency of Double-Bounded Dichotomous Choice Contingent Valuation,” *American Journal of Agricultural Economics*, 73, 4, 1255–1263.
- Hanssens, D. M. and K. H. Pauwels (2016), “Demonstrating the Value of Marketing,” *Journal of Marketing: AMA/MSI Special Issue*, 80, 173–190.
- Hausman, J. (2012), “Contingent Valuation: From Dubious to Hopeless,” *Journal of Economic Perspectives*, 26, 4, 43–56.
- Huber, J. (1997), “What We Have Learned from 20 Years of Conjoint Research: When to Use Self-Explicated, Graded Pairs, Full Profiles or Choice Experiments,” *Sawtooth Software Research Paper Series*, 1–15.
- Jamieson, S. (2004), “Likert Scales: How to (Ab)use Them,” *Medical Education*, 38, 12, 1217–1218.
- Johnston, R. J. (2006), “Is Hypothetical Bias Universal? Validating Contingent Valuation Responses Using a Binding Public Referendum,” *Journal of Environmental Economics and Management*, 52, 1, 469–481.
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- Krosnick, J. A., A. L. Holbrook, M. K. Berent, R. T. Carson, W. M. Hanemann, R. J. Kopp, R. C. Mitchell, S. Presser, P. A. Ruud, V. K. Smith, W. R. Moody, M. C. Green, and M. Conaway (2002), “The Impact of ‘No Opinion’ Response Options on Data Quality: Non-Attitude Reduction or an Invitation to Satisfice?” *Public Opinion Quarterly*, 66, 3, 371–403.
- Lewbel, A. (2000), “Semiparametric Qualitative Response Model Estimation with Unknown Heteroscedasticity or Instrumental Variables,” *Journal of Econometrics*, 97, 1, 145–177.

- Lopez-Feldman, A. (2012), “Introduction to Contingent Valuation Using Stata,” *Munich Personal RePEc Archive*, MPRA Paper No. 41018, 1–16.
- Macdonald, E. K. and B. M. Sharp (2000), “Brand Awareness Effects on Consumer Decision Making for a Common, Repeat Purchase Product: A Replication,” *Journal of Business Research*, 48, 5–15.
- Oppenheimer, D. M. et al. (2009), “Instructional Manipulation Checks: Detecting Satisficing to Increase Statistical Power,” *Journal of Experimental Social Psychology*, 45, 4, 867–872.
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- Skowronski, J. J. and D. E. Carlston (1989), “Negativity and Extremity Biases in Impression Formation: A Review of Explanations,” *Psychological Bulletin*, 105, 1, 131–142.
- Struminskaya, B., K. Weyandt, and M. Bosnjak (2015), “The Effects of Questionnaire Completion Using Mobile Devices on Data Quality. Evidence from a Probability-Based General Population Panel,” *Methods, Data, Analyses*, 9, 2, 261–292.
- Watanabe, M. (2010), “Nonparametric Estimation of Mean Willingness to Pay from Discrete Response Valuation Data,” *American Journal of Agricultural Economics*, 92, 4, 1114–1135.
- Zhu, F. and X. Zhang (2010), “Impact of Online Consumer Reviews on Sales: The Moderating Role of Product and Consumer Characteristics,” *Journal of Marketing*, 74, 2, 133–148.

Books

- Diamond, S. S. (2011), “Reference Guide on Survey Research,” in *Reference Manual on Scientific Evidence*, Washington, D.C.: The National Academies Press, 359–424.
- Edwards, G. K. (2012), “The Daubert Revolution and Lanham Act Surveys,” in *Trademark and Deceptive Advertising Surveys*, S. Diamond and J. Swann, eds., Chicago, IL: ABA Publishing, 329–362.
- Gerber, A. S. and D. P. Green (2012), *Field Experiments: Design, Analysis, and Interpretation*, New York, NY: W. W. Norton & Company, Inc.
- Goolsbee, A., et al. (2013), “Supply and Demand,” in *Microeconomics*, New York, NY: Worth Publishers, 13–59.

- Hanssens, D. M., ed. (2015), *Empirical Generalizations about Marketing Impact*, Cambridge, MA: Marketing Science Institute.
- J. Alba, ed. (2011), *Consumer Insights: Findings from Behavioral Research*, Cambridge, MA: Marketing Science Institute.
- Kotler, P. and K. L. Keller (2012), “Creating Brand Equity,” in *Marketing Management*, Upper Saddle River, NJ: Prentice Hall, 240–273.
- Kotler, P. and K. L. Keller (2012), “Defining Marketing for the 21st Century,” in *Marketing Management*, Upper Saddle River, NJ: Prentice Hall, 2–31.
- Kotler, P. and K. L. Keller (2012), “Developing Pricing Strategies and Programs,” in *Marketing Management*, Upper Saddle River, NJ: Prentice Hall, 382–413.
- Kotler, P. and K. L. Keller (2016), *Marketing Management*, Essex, England: Pearson Education Limited.
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- Krosnick, J. A. and S. Presser (2010), “Question and Questionnaire Design,” in *Handbook of Survey Research*, J. D. Wright and P. V. Marsden eds., West Yorkshire, England: Emerald Group Publishing Limited, 263–313.
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- Marcus, S., et al., eds. (2004), *Manual for Complex Litigation*, Washington, D.C.: Federal Judicial Center.
- Mas-Colell, A., et al. (1995), “Competitive Markets,” in *Microeconomic Theory*, New York, NY: Oxford University Press, Inc., 311–349.
- Orme, B. K. (2014), *Getting Started with Conjoint Analysis: Strategies for Product Design and Pricing Research*, Manhattan Beach, CA: Research Publishers.
- Peter J. P. and J. C. Olson (2010), “Consumer Behavior and Promotion Strategy,” in *Consumer Behavior and Marketing Strategy*, New York, NY: McGraw-Hill/Irwin, 405–438.
- Peter, J. P. and J. C. Olson (2010), “Affect and Cognition and Marketing Strategy,” in *Consumer Behavior and Marketing Strategy*, New York, NY: McGraw-Hill/Irwin, 36–65.
- Peter, J. P. and J. C. Olson (2010), “Consumer Behavior, Electronic Commerce, and Channel Strategy,” in *Consumer Behavior and Marketing Strategy*, New York, NY: McGraw-Hill/Irwin, 461–489.

- Rao, V. R. (2014), *Applied Conjoint Analysis*, New York, NY: Springer.
- Simonson, I. and R. Kivetz (2012), “Demand Effects in Likelihood of Confusion Surveys: The Importance of Marketplace Conditions,” in *Trademark and Deceptive Advertising Surveys*, S. Diamond and J. Swann, eds., Chicago, IL: ABA Publishing, 243–259.
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- Deposition of Dr. Jon A. Krosnick, May 8, 2019.
- Deposition of Dr. Sean P. Callan, May 9, 2019.
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